NORTH CAROLINA DIVISION OF AIR QUALITY

Air Permit Review

Permit Issue Date:

Region: Asheville Regional Office
County: Haywood
NC Facility ID: 4400159
Inspector's Name: Brendan Davey
Date of Last Inspection: 09/22/2016
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Blue Ridge Paper Products - Canton Mill

Facility Address:
Blue Ridge Paper Products - Canton Mill
175 Main Street
Canton, NC 28716

SIC: 2621 / Paper Mills Exc Building Paper
NAICS: 322121 / Paper (except Newsprint) Mills

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D .0614
NSPS:
NESHAP:
PSD:
PSD Avoidance:
NC Toxics: 02D .1100
112(r):
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Brian Satterfield EHS&S Manager (828) 646-2381 175 Main Street Canton, NC 28716	Michael P. Ferguson Acting General Manager (828) 646-2461 P.O. Box 4000 Canton, NC 28716	Brian Satterfield EHS&S Manager (828) 646-2381 175 Main Street Canton, NC 28716

Application Data

Application Number: 4400159.11A
Date Received: 06/29/2011
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 08961/T18
Existing Permit Issue Date: 03/29/2016
Existing Permit Expiration Date: 03/31/2017

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2014	7593.86	4344.54	1481.26	2922.19	728.55	818.32	610.26 [Methanol (methyl alcohol)]
2013	8004.07	4284.98	1446.31	2975.07	726.96	813.89	602.82 [Methanol (methyl alcohol)]
2012	8795.82	4266.61	1727.28	2879.87	744.62	937.98	704.41 [Methanol (methyl alcohol)]
2011	8511.87	3955.49	1674.56	2817.88	627.89	903.44	675.05 [Methanol (methyl alcohol)]
2010	8839.21	3981.98	1293.71	2810.51	637.53	884.53	664.04 [Methanol (methyl alcohol)]

Review Engineer: Heather Sands

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 08961/T19
Permit Issue Date:
Permit Expiration Date:

I. Purpose of Application

Evergreen Packaging operates Blue Ridge Paper Products, Inc. (Blue Ridge Paper), an integrated Kraft pulp and paper mill located in Canton, Haywood County, North Carolina. Blue Ridge Paper currently holds Title V Permit No. 08961T18 with an expiration date of the earlier of March 31, 2017, or renewal of permit 08961T13 has been issued or denied. This permit application is for a permit renewal with modification. The renewal application was received on June 29, 2011, which was at least nine months prior to the original permit expiration date of March 31, 2012.

In addition, the permit application satisfies the condition in Permit No. 08961T13 (Section 2.1 N.4.f) requiring Blue Ridge Paper to submit a Title V permit application within 12 months of commencing operation of either of the two new smelt tanks.

II. Facility Description

The Blue Ridge Paper facility is a bleached kraft pulp mill producing bleached kraft softwood and hardwood pulp, paper and paperboard. Existing sources include: five power boilers, a batch digester and brownstock washer system, two recovery furnaces and associated smelt dissolving tanks, black liquor evaporator system, turpentine recovery system, two lime kilns, a chlorine dioxide generator, two pulp bleaching systems, three paper machines and a paperboard dryer. Hazardous Air Pollutant compounds (HAP) from the pulping and chemical recovery systems are collected via a closed foul gas collection system and foul condensate steam stripper system for burning in the lime kilns per 40 CFR 63, Subpart S.

Overall Facility Description from the Initial Title V Application:

A mix of hardwood and softwood pulp is produced from wood furnished by off-site chip mills. The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips. The wood chips are mixed with white liquor and cooked in 18 batch digesters. The pulp and lignin mixture is discharged into two blow tanks common to hardwood and pine digesters, respectively. The brown pulp is separated from wood knots and washed in a countercurrent brownstock washing system. The softwood and hardwood pulps are further delignified by treating the pulp with oxygen in a pressurized vessel in oxygen reactors. After oxygen delignification, the pulp is screened, washed, and bleached.

The organic or lignin laden filtrates (black liquor) from the pulping, brown stock washing, and oxygen delignification processes are combined and concentrated in the evaporators. Concentrated black liquor (heavy black liquor) is burned in recovery furnaces that produce steam for energy generation and heat for the pulp and paper making process. Molten inorganic ash (smelt) from the recovery furnaces is dissolved in water to make green liquor in the smelt dissolving tanks. The green liquor is then reprocessed into reusable chemicals. The causticizing process combines lime with the green liquor in a slaker reactor to produce sodium hydroxide and sodium sulfide solution (white liquor). A by-product of slaking is lime mud (calcium carbonate), which is washed and then reburned in two rotary kilns to produce reusable lime (calcium oxide).

The mill uses five power boilers to produce steam for energy generation and provide heat for the pulping and paper making processes. Through cogeneration by utilization of steam driven turbines, the mill produces most of the electricity and steam required to run operations. Blue Ridge Paper is currently in the process of a repowering project where two of the existing coal-fired boilers will be decommissioned and replaced with natural gas-fired package boilers.

Product paper is produced from the pulp on four paper machines. Paper produced on three of the paper machines is packaged in a converting area and is shipped in roll form to final customers. Paperboard produced on the fourth machine is trucked offsite.

III. Application History

Permit History since Last TV Permit Renewal

April 11, 2007	Permit No. 08961T08 issued pursuant to Application No. 4400159.06A. The purpose of this permitting action was: (1) the final resolving settlement action of the facility's administrative appeal of their initial Title V permit; (2) incorporation of permit changes to

	the facility's state air permit during the appeal process and formally included these changes pursuant to Part 70 and state permitting requirements into the Title V permit; and (3) inclusion of the pre-draft, EPA-approved Equivalency by Permit (EBP) language for 40 CFR 63 Subpart S into the Title V permit pursuant to 40 CFR §63.94.
September 12, 2007	Permit No. 08961T09 issued pursuant to Application No. 4400159.07A. On June 8, 2007, the United States Court of Appeals for the District of Columbia Circuit issued a decision vacating in its entirety and remanding the Boiler MACT, contained in 40 CFR 63 Subpart DDDDD. The purpose of this application was to remove this MACT from the Air Permit as requested by the Permittee.
December 17, 2007	Permit No. 08961T10 issued pursuant to Application No. 4400159.06E. The purpose of this application was a Best Available Retrofit Technology Determination (BART) under 15A NCAC 02D .0543 "Best Available Retrofit Technology.
April 9, 2009	Permit No. 08961T11 issued pursuant to Application No. 4400159.09F. The purpose of this application was a minor modification of the existing permit to allow the burning of ultra-low sulfur (ULS) No. 2 fuel oil with black liquor solids (BLS) as a fuel for the Nos. 10 and 11 Recovery.
April 26, 2010	Permit No. 08961T12 issued pursuant to Application No. 4400159.09F. The purpose of this application was for the reconstruction of the Nos. 10 and 11 Smelt Dissolving Tanks (SDT). After each existing SDT is reconstructed it will become a 40 CFR 60 Subpart BB affected emission source per 40 CFR 60.15 "reconstruction." DAQ also modified the permit to denote the applicability of NSPS Subpart Y "Coal Preparation Plants" to certain emission sources that were modified or reconstructed after October 24, 1974. A subset of the coal handling operations was replaced after May 27, 2009 and are now subject to the revised Subpart Y requirements.
March 28, 2011	Permit No. 08961T13 issued pursuant to Application No. 4400159.09D. This application was a Part 2 MACT "Hammer" application for five existing boilers and two existing process heaters.
January 9, 2012	Permit No. 08961T14 issued pursuant to Application No. 4400159.10A. The purpose of this application was allow to Blue Ridge to combust natural gas in the Nos. 4 and 5 Lime Kilns and the Nos. 10 and 11 Recovery Furnaces in addition to the fuel oil currently fired in these units. To provide the capability to combust either natural gas or fuel oil or a combination of both fuels, new burners would be installed in each lime kiln and recovery furnace.
April 24, 2012	Permit No. 08961T15 issued pursuant to Application No. 4400159.12A. The purpose of this application was to add Section 112(j) case-by-case work practice standards to the T14 Permit that would apply during start-up, shutdown, and malfunction (SSM) periods for Subpart S and Subpart MM affected sources. This permit modification changed the expiration date to March 31, 2017.
March 24, 2015	Permit No. 08961T16 issued pursuant to Application No. 4400159.14A. The purpose of this application was to modify several 112(j) provisions for their power boilers. This permit modification also incorporated elements that were requested as administrative amendments in Permit Application No. 4400159.07C (which was eventually consolidated into Permit Application No. 4400159.09A).
July 29, 2015	Permit No. 08961T17 issued pursuant to Application No. 4400159.15A. This permit application was to revise the Clean Air Interstate rule (CAIR) language to reflect that the provisions in 15A NCAC 02D .2400 no longer apply to the five power boilers at the Canton, North Carolina mill.
March 29, 2016	Permit No. 08961T18 issued pursuant to Permit Application Nos. 4400159.15C and 4400159.16A. The initial permit application (.15C) was for an administrative amendment to

incorporate operating parameter limitations established during the performance tests conducted on the five boilers. Permit Application No. 4400159.16A, was the first step of a two-step significant modification to replace two of their coal-fired utility boilers with natural gas package boilers and to add scrubbers to two of the coal-fired boilers. In addition, this permit application requested that the NO_X CEMS requirements be removed from the permit as they no longer apply.

Application Chronology

June 29, 2011	Blue Ridge Paper submitted Permit Application No. 4400159.11A for a Title V Permit Renewal.
September 6, 2013	Permit application transferred to Heather Sands for processing.
October 10, 2013	Permit application amended to request removal of primary operating scenarios for No. 10 Smelt Dissolving Tank.[1]
February 18, 2014	NC DAQ received a Title V Permit Application No. 4400159.14A.
March 24, 2015	Permit No. 08961T16 issued pursuant to Application No. 4400159.14A
April 8, 2015	Blue Ridge Paper submitted Permit Application No. 4400159.15A
July 29, 2015	Permit No. 08961T17 issued pursuant to Application No. 4400159.15A
November 19, 2016	Preliminary draft permit sent to Blue Ridge Paper for review.
December 18, 2015	Blue Ridge Paper submitted Permit Application No. 4400159.15C
January 7, 2016	Revised draft of permit review submitted to Blue Ridge Paper for review. Changes were made to the CAM discussion highlighting a need for Blue Ridge to revise the CAM analysis for the renewal.
January 12, 2016	Blue Ridge Paper amended Permit Application No. 4400159.15C
January 19, 2016	Blue Ridge Paper submitted comments on preliminary draft permit. Blue Ridge Paper submitted Permit Application No. 4400159.16A
March 18, 2016	Blue Ridge Paper submitted an addendum to the Permit Application No. 4400159.16A
March 29, 2016	Permit No. 08961T18 issued pursuant to Permit Application Nos. 4400159.15C and .16A.
May 10, 2016	Draft of Section 1 equipment table submitted to Blue Ridge Paper for review.
June 3, 2016	Blue Ridge Paper submitted comments on the draft Section 1 equipment table, as well as a revised CAM analysis for the renewal application.
June 24, 2016	Site visit to Blue Ridge Paper to tour the facility and go over comments received on June 3.
July 17, 2016	Blue Ridge Paper submitted a request for a change in the responsible official for the mill. Dane Griswold has been replaced by Michael P. Ferguson, Acting General Manager.
August 4, 2016	Blue Ridge Paper submitted a revision to the June 3rd CAM analysis.
August 12, 2016	Draft permit and permit review sent to Blue Ridge Paper, regional office and internal DAQ personnel for review.

[1] Email from Upton, M., Evergreen Packaging – Canton Mill, to H. Sands, NC DEQ. Operating Scenarios for Smelt Dissolving Tanks Nos. 10 and 11. October 10, 2013.

August 15, 2016	Blue Ridge Paper submitted a request for a change in the responsible official for the mill. Steven Hutchins has been named the General Manager for Canton and Waynesville Operations.
August 29, 2016	Comments from the facility were received and incorporated. See below for discussion.
August 31, 2016	Draft permit was submitted to ARO for review.
September 2, 2016	Blue Ridge Paper met with DAQ to discuss CAM for the No. 4 Lime Kiln.
September 13, 2016	Comments from the Region were provided. See below for discussion on comments and responses.
September 22, 2016	Draft permit was sent to Blue Ridge Paper for a final review.
XXXX YY, 2016	Draft permit sent to public notice.
XXXX YY, 2016	Public comment period ends. ***Add comments received***
XXXX YY, 2016	Comment received from Blue Ridge Paper. ***Add comments received***
XXXX YY, 2015	EPA comment period ends. ***Add comments received***
XXXX YY, 2015	Permit issued.

IV. Permit Modifications

A. Summary of Changes to Permit

Many of the permit modifications were editorial in nature, revising the permit language to be consistent with the most current permit shell and updating conditions to reflect the most current rules. In addition to these changes, several other changes have been made to the permit. Table 1 provides a summary of all changes to the current permit as part of the renewal. All changes to permitted emissions sources and the new insignificant emissions sources were entered into the Title V Equipment Editor (TVEE).

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
Cover letter	Cover letter		- Amended application type, permit revision numbers and dates. - Changed responsible official from Dane Griswold to Stephen Hutchins.
Cover letter attachment	Cover letter attachment	Summary of changes to permit	- Updated to current permit language.

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
		Insignificant Activities	- Removed Reject Knots (ID No. I-G03007) – this source was moved to the permit in Section 1 and is a duplicate. Blue Ridge Paper confirmed that it should not be on the insignificant activities list. - Removed No. 4 Boiler Coal Bunker (ID No. I-G11041) – this source is also listed on the permit as ID No. N4-BUNKER. Blue Ridge Paper confirmed that it should not be on the insignificant activities list. - Corrected typo on the ID No. for the No. 4 Power Boiler flyash silo from I-G10079 to I-G11079. This is consistent with the Power Area 11. - Blue Ridge Paper requested that the Depoly System be removed because deploy is no longer used at the mill. - Updated footnotes to correct websites.
1	1	Permit Cover Page	- Updated permit revision number and permit issuance date
2-104	2 – 135	All	- Updated Permit Revision Number in header. - Made minor corrections in capitalization and wording throughout permit. - Updated language throughout permit to be consistent with Permit Shell.
3-11	3 – 11	Section 1	- Updated page numbers in table. - Updated emission source numbers and descriptions throughout table so that TVEE will now reflect the individual sources included under the Emission Source ID No. - Identified sources that are enclosed and do not emit directly to the atmosphere by adding a footnote to the table. - Digesters, evaporators, foul condensate stripper system and turpentine recovery system: removed G07018 (Foul condensate via closed collection system) from the Control Device ID No. and Description and added a note to the Emission Source Description showing that foul condensates from the digester area are sent to the condensate stripper system. - Moved deckers and high density storage to be grouped with the Oxygen Delignification Area. - Added a note to the bleaching system emission source descriptions to highlight that the extraction stage - Removed the word oxidized from the description of the white liquor flow rate in the bleachplant scrubbers (ID Nos. 05-CD-002-01 and 05-CD-017-01) - Divided up the evaporation system to show that the sources are the evaporator sets and their associated hotwells. - Clarified, in the emission source description, that the black liquor solids feed rate in the BLOX system is design rate - Removed primary and alternate operating scenario designations for the smelt dissolving tanks. - Corrected Emission Source ID No. for the green liquor clarification and storage from G10036 to G10089. - Removed igniters from Big Bill description (they will not be installed now that Big Bill is slated for being decommissioned). - Changed description for Riley Bark Boiler to include biomass and corresponding footnote identifying biomass.

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
			- Changed Emission Source ID No. for the No. 4 Boiler Bunker from ES-N4-BUNKER to G11041. This source was also listed on the Insignificant Activities List as I-G11041. - Added the word "design" to the liquor injection rate for the Tall Oil Reactor scrubber (ID No. 21-ST-008-01) - Added Nos. 1 and 2 Fiberline Building Ventilation – Fugitives (ID Nos. G23066.k and G23066.l). These sources included in the inventory, but were missing from the permit.
12 – 79	12 – 85	Section 2.1	- Removed size information from condition headers to streamline the headers - Updated tables of summaries of limits and standards throughout permit to be consistent with Permit Shell. - Made sure that the table is in the same order as the conditions for each emission source. - Updated cross references to include at a minimum the first subparagraph (e.g., Section 2.1 A.1)
12 – 13	12 – 13	Section 2.1 A	- updated paragraph A.1.c to add the noncompliance statement.
15 – 16	14	Section 2.1 D	- Removed 02D .0515 condition from permit for the white liquor oxidation system. This system is not a source of particulate emissions.
17	15	Section 2.1 E	- Removed the production from the description of this source. It is not a permitted limit.
18 – 19	16 – 17	Section 2.1 F	- Updated the 112(r) condition to current permit language; - Added paragraphs F.1.d and F.1.e, to require the periodic submittal of the risk management plan updates.
20	18	Section 2.1 G	- Added noncompliance statement to paragraph G.1.c.
22 – 23	19 – 20	Section 2.1 I and J	- Switched these two conditions. The heavy black liquor storage tanks are now Section 2.1 I and the foul condensate system is not Section 2.1 J. - Added noncompliance statement to paragraph J.1.d
24 – 27	21 – 24	Section 2.1 K	- Removed the generic testing condition in paragraph 2.1 K.1.b and renumbered remaining paragraphs. - Added reference to 02D .0608 to the heading for paragraph K.2. - In Paragraph K.2.e merged noncompliance statements. - Added CAM condition K.4, for PM monitoring compliance with 02D .0508
28 – 30	25 – 28	Section 2.1 L	- Removed the generic testing condition in paragraph L.1.b and renumbered remaining paragraphs. - Added reference to 02D .0608 to the heading for paragraph L.2. - In Paragraph L.2.e merged noncompliance statements. - Added CAM condition L.4, for PM monitoring compliance with 02D .0508
33 – 36	31 – 34	Section 2.1 N	- Removed primary and alternate operating scenario (AOS) distinction. The AOS is now the permit condtion for the Smelt Dissolving Tanks. - Removed condition N.3 (primary operating scenario) and renumbered remaining conditions. - Added CAM condition N.4, for PM monitoring compliance with 02D .0508

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
37 – 42	35 – 40	Section 2.1 O	- Removed the generic testing condition in paragraph N.1.b and renumbered remaining paragraphs. - Split the 02D .0508 compliance demonstration for the No. 4 Lime Kiln. The kiln will now be required to meet the Subpart MM monitoring/recordkeeping/reporting requirements when more than 50 percent of the heat input comes from the combustion of No. 6 fuel oil. When 50 percent or less of the heat input comes from the combustion of No. 5 fuel oil, the Permittee will establish monitoring parameters to demonstrate compliance with 02D .0508. (NOTE: The No. 5 Lime Kiln will continue to demonstrate compliance with the Subpart MM monitoring/recordkeeping/reporting requirements for all firing scenarios.) - Added CAM condtion O.5, for PM monitoring compliance with 02D .0508.
47 – 51	47 – 52	Section 2.1 T	- Removed the generic testing condition in paragraph T.1.b and renumbered remaining paragraphs. - Changed the periodic testing requirement in paragraph T.1.b from once every permit cycle to once every five years (and not longer than 61 months between tests). - Added reference to 02D .0608 to the heading for paragraph T.2. - Removed redundant language from paragraph T.4.b. - Added CAM condition T.6 for PM monitoring compliance with 02D .0503.
52 – 55	53 – 57	Section 2.1 U	- Removed the generic testing condition in paragraph U.1.b and renumbered remaining paragraphs. - Changed the periodic testing requirement in paragraph U.1.b from once every permit cycle to once every five years (and not longer than 61 months between tests). - Removed redundant language from paragraph U.2.d. - Added CAM condition U.3 for PM monitoring compliance with 02D .0530
56 – 60	58 – 64	Section 2.1 V	- Removed the generic testing condition in paragraph V.1.b and renumbered remaining paragraphs. - Added provisions for when reevaluating or reestablishing the monitoring parameters to paragraph V.5.c. - Added language to paragraph V.5.d stating that the compliance monitoring parameters shall not apply during subsequent testing. - Added CAM condition V.7 for PM monitoring compliance with 02D .0530
61 – 62	65 – 68	Section 2.1 W	- Removed reference to cyclones. According the Permittee, the cyclones are a part of the process and are not control devices. - Added CAM condition W.3 for PM monitoring compliance with 02D .0515.
63 – 64	69 – 70	Section 2.1 Y	- Added paragraph Y.1.e requiring that records of any maintenance performed on the bagfilters be submitted within 30 days of a written request. Renumbered remaining paragraph.

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
65 – 66	71 – 72	Section 2.1 AA	- Removed reference to liquid and gaseous fuels and combustion air from paragraph AA.1.a for the 02D .0515 condition. This is not a fuel combustion source and the statement was unnecessary.
N/A	73	Section 2.1 DD	- Added new condition for building fugitives. These sources are only subject to toxics conditions and do not have any other applicable regulations. - Renumbered remaining Section 2.1 conditions.
70 – 72	76 – 78	Section 2.1 GG	- Renumbered from Section 2.1 FF to GG. - Changed ID number for the No. 4 Boiler Bunker (from ID No. N4-BUNKER to G11041). This source was already in the permit on the insignificant activities list with ID No. I-G11041 but had been moved to the permit but not correctly renumbered. - Added the PSD standard to the summary of limits and standards table. - Removed generic testing condition in paragraph FF.2.b and renumbered remaining paragraphs. - Revised the monthly monitoring requirement in paragraph FF.2.d to be equivalent to the visible emission monitoring requirements in 02D .0521. - Added opacity readings and performance test results to the summary report content requirements.
80 – 83	86 – 89	Section 2.2 A	- Split the condition for the operations restrictions into two paragraphs: one for operating restrictions and one for emissions limitations.
84 – 90	91 – 100	Section 2.2 C.1	- Updated the table in C.1 to be consistent with the Section 1 equipment table - Added clarification to summary of limits and standards table for the nonexempt source requiremetns. - Added paragraph C.1.b.iv to refer to the 112(j) startup, shutdown and malfunction requirements, which apply until September 11, 2020. - Moved paragraph C.1.e to C.1.c.iii to make it more clear that there are venting allowances for the LVHC and HVLC sources. - Updated the requirements for the pulping condensate requirements to clarify which sources are subject. - Added the new 5-year performance testing requirement (paragraph C.1.i). Also included provisions for testing outside established monitoring ranges. - Added standards for enclosures and closed-vent systems (paragraph C.1.j) - Expanded the requirements in the permit to parallel rule language for the monitoring and inspecting of enclosures, closed vent and closed collection systems in paragraph C.1.p - added SSM conditions (C.1.r, and s) - added recordkeeping for malfunctions including affirmative defense.. - added reporting for malfunctions, performance tests and affirmative defense.

Table 1. Summary of Changes to Permit No. 08961T18

Old Page No.	New Page No.	Condition No.	Description of Change(s)
90 – 92	100 – 103	Section 2.2 C.2	- Updated the list of sources for which the EBP applies in C.2.a. - Added "(including period of startup, shutdown, or malfunction)" to the calculation of the periods of excess emissions to parallel the Subpart S requirements that emissions standards apply at all times. - added a 5-year annual testing requirement to C.2.e. - added SSM conditions to C.2.j and C.2.k. - Removed references to a SSM plan from entire section. - added recordkeeping for malfunctions including affirmative defense. - added reporting for malfunctions, performance tests and affirmative defense.
93 – 97	104 – 108	Section 2.2 D	- Removed Table 2.2 D-1 from permit and added bubble emission limits to paragraph D.1.b to be more clear about the limits that apply. - Added paragraph D.1.b.ii to refer to the 112(j) startup, shutdown and malfunction requirements. - Added COMS-specific language from Subpart MM to paragraph D.1.e. - Added noncompliance sentence to paragraph D.1.g. - Added provisions for testing outside of operational parameters ranges during performance testing for the purpose of reevaluating compliance in paragraphs D.1.g and D.1.i. - Removed POS-related conditions and made the AOS the operating conditions in Table 2.2 D-2 for the No. 11 Smelt Dissolving Tank. - Updated paragraph D.2.k to include rule language for recordkeeping related to the SSM plan. - Updated paragraph D.2.o to be consistent with Subpart MM.
98 – 105	109 – 117	Section 2.2 E	- Corrected the PM emission limitation equation in paragraph E.1.a. The factor related to the green wood was incorrect. - Corrected the CO emission limitation equation in paragraph E.1.a to only apply when firing coal and fuel oil. - added noncompliance sentence where missing throughout Section 2.2 E.1. - Rearranged and consolidated paragraphs E.1.n through E.1.t to now be paragraphs E.1.n through E.1p. Renumbered remaining paragraphs. - Added provisions to paragraphs E.1.s and E.1.y for operating outside of operating parameter ranges when reevaluating compliance during performance testing.
107 – 109	119 – 121	Section 2.2 G	- Reformatted the entire condition to be consistent with numbering system used throughout the permit. - Added noncompliance statements throughout. - Added paragraph G.4.a to insert the sunset date of the Subpart S 112j provisions. Renumbered remaining paragraphs.
110	122	Section 2.3 A	Replaced condition with new toxics limits developed according to 15A NCAC 02D .1100.

B. Changes to Nos. 10 and 11 Smelt Dissolving Tank Conditions

At the time of the permit renewal application, the permit in place (Permit No. 08961T13) included conditions for primary and alternate operating scenarios for the Nos. 10 and 11 Smelt Dissolving Tanks. The primary operating scenarios applied to the preconstruction operation of these units and the alternate scenarios were for the post construction operation. After Permit No. 08961T12 was issued, the project to rebuild the No. 11 Smelt Dissolving Tank was completed. Therefore, in their permit renewal application (No. 4400159.11A), Blue Ridge Paper requested the elimination of the primary operating scenario for the No. 11 Smelt Dissolving Tank.

In October 2013, Blue Ridge Paper amended their permit application by requesting the removal of the primary operating scenario for the No. 10 Smelt Dissolving Tank.[2] Therefore, Section 2.1 N has been modified to remove the primary operating scenario for both the Nos. 10 and 11 Smelt Dissolving Tanks and making the alternate operating scenario the applicable conditions for the tanks.

These requests also satisfy the condition in Section 2.1 N.4.f, which requires submittal of a Title V application within 12 months of commencing operation of either of the two smelt dissolving tanks. Therefore, the condition was removed from the permit.

C. Fully Enclosed Sources

There are several process units at the Blue Ridge Paper mill that are fully enclosed and do not produce emissions directly to the atmosphere. However, for completeness, the following process units were added to the table in Section 1 with a footnote indicating that they are not a source of emissions:

- No. 2 Pine Fiberline Bleaching System: D1, D2 and Eo Stage Washers;
- No. 2 Pine Fiberline Brownstock Washing System: Washers and filtrate tanks;
- No. 1 Hardwood Fiberline Oxygen Delignification System: O_2 Reactor; and
- No. 2 Pine Fiberline Oxygen Delignification System: O_2 Reactor.

V. Regulatory Review – State Rules

Blue Ridge Paper is subject to several NC regulations. An extensive review for each applicable regulation is not included in this document, as the facility's status with respect to most of these regulations has not changed. For some regulations below more discussion is provided for clarification and background, as necessary. When necessary, the permit was updated to reflect the most current requirements and permit language for all applicable regulations.

A. 15A NCAC 02D .0503: Particulates from Fuel Burning Indirect Heat Exchangers

This rule applies to particulate matter emissions from the combustion of fuel that are discharged from any stack or chimney into the atmosphere. The regulation provides the following equation to be used to determine the allowable emissions limit in terms of maximum heat input:

$$E = 1.090 \times Q^{-0.2594}$$

Where:

E = allowable emissions limit for particulate matter in lb/million Btu; and

Q = maximum heat input in million Btu/hr. The maximum heat input is the total heat content of all fuels and is the sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted when determining the allowable emission limit for each fuel burning indirect heat exchanger.

This emissions limit does not apply when wood is burned in the indirect heat exchanger (see Section V.B, below for more details). Furthermore, the No. 4 Power Boiler is subject to the Boiler NSPS (40 CFR Part 60, Subpart D) and is not subject to 02D .0503.[3] The following sources are subject to regulation 02D .0503:

[2] Email from Upton, M., Evergreen Packaging – Canton Mill to H. Sands, NC DEQ. Operating Scenarios for Smelt Dissolving Tanks Nos. 10 and 11. October 10, 2013.

[3] According to 15A NCAC 02D .0524(a), "…sources subject to new source performance standards promulgated in 40 CFR Part 60 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements,

- Big Bill utility boiler (ID No. G11037) – 364 million Btu per hour maximum heat input rate;
- Peter G utility boiler (ID No. G11038) – 364 million Btu per hour maximum heat input rate;
- Riley Coal utility boiler (ID No. G11039) – 399 million Btu per hour maximum heat input rate;
- Riley Bark boiler (ID No. G11042) – 380 million Btu per hour maximum heat input rate;
- No. 1 Natural Gas Package Boiler (ID No. G11050) – 225 million Btu per hour maximum heat input rate; and
- No. 2 Natural Gas Package Boiler (ID No. G11051) – 225 million Btu per hour maximum heat input rate.

The particulates allowable emissions limit for the Big Bill, Peter G, Riley Coal, and Riley Bark boilers were calculated by summing the maximum heat input for the four boilers, using the equation above as follows:

$E = 1.090 \times (364 + 364 + 399 + 380)^{-0.2594}$
$E = 0.16$ lb/million Btu

For the Riley Bark boiler, this allowable emissions limit applies when firing coal and fuel oil only. The Riley Bark boiler also combusts wood in combination with oil and coal; therefore, it is also subject to 02D .0504 (see Section V.B). Under 02D .0503(f), when wood is combusted in combination with other fuels, the allowable emission limit is calculated using the following equation:

$Ec = [(Ew)(Qw) + (Eo)(Qo)]/Qt$

Where;

Ec = emission limit for combined firing (pound per mmBtu);
Ew = emission limit for wood only (see Section V.B)
= 0.31 lb/million Btu
Qw = actual wood heat input including woodwaste
Eo = emission limit for other fuels (see above)
= 0.16 lb/million Btu
Qo = actual heat input other than wood heat input
Qt = Qw + Qo

The allowable emission rate for the Nos. 1 and 2 Package Boilers is calculated based on the combined heat input rates of all the boilers at the facility as follows:

$Q = \Sigma\,[\text{max heat input}]_{\text{(Big Bill, Peter G, Riley Coal, Riley Bark,No. 4 PB)}} + \Sigma\,[\text{max heat input}]_{\text{(Nos. 1 and 2 Package Boilers)}}$

Q = 364 MMBtu/hr + 364 MMBtu/hr + 399 MMBtu/hr + 380 MMBtu/hr + 535 MMBtu/hr + 225 MBtu/hr + 225 MMBtu/hr
= 2,492 MMBtu/hr

Therefore, the PM limit for the Nos. 1 and 2 Package Boilers is calculated as follows:

$E = 1.090 \times [2{,}492 \text{ MMBtu/hr}]^{-0.2594}$
$E = 0.143$ lb PM/MMBtu

Due to the inherently low emissions associated with firing natural gas, no control is necessary for the Nos. 1 and 2 Package Boilers to comply with this limit. No testing, monitoring, recordkeeping, and reporting is required for these boilers.

Particulate emissions from the Big Bill, Peter G, and Riley Coal utility boilers are controlled using electrostatic precipitators (ESP). Each boiler is equipped with a continuous opacity monitor and opacity is used as an indication of boiler performance and particulate emissions. Annual performance tests are required for these boilers, unless reduced testing frequency is allowed based on past testing. If the reduced frequency is allowed, Blue Ridge Paper would be able to test once every five years. Because the typical permit term is five years, the current permit stated that the reduced frequency testing would be allowed once every permit term. To ensure that not more than five years

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performance test requirements, test method and procedural provisions, and any other provisions, as required therein, rather than with any otherwise-applicable rule in this Section which would be in conflict therewith."

elapse between tests, the permit was revised to specify that if reduced frequency testing is allowed, they would be every five years, not to exceed 61 months.

Particulate emissions from the Riley Bark boiler are controlled with partial flyash reinjection, a multicyclone, and a venturi-type wet scrubber. The boiler is equipped with a flowmeter and pressure drop indicator and compliance is demonstrated by maintaining the scrubbing liquid flowrate and pressure drop above the operating parameters set during performance tests.

No changes to these requirements are necessary as a part of this renewal.

B. 15A NCAC 02D .0504 Particulates from Wood Burning Indirect Heat Exchangers

This regulation applies to boilers in which wood is burned for the primary purpose of producing heat or power. The regulation provides the following equation to be used to determine the allowable emissions limit in terms of maximum heat input:

$$E = 1.1698 \times Q^{-0.2230}$$

Where:

E = allowable emissions limit for particulate matter in lb/million Btu; and

Q = maximum heat input in million Btu/hr. The maximum heat input is determined using the heat content of wood specified in the rule (8,000 Btu/pound, dry basis).

The Riley Bark boiler (ID No. G11042), 380 million Btu per hour maximum heat input rate, is subject to this rule when burning wood. Using the equation above, the allowable emissions limit is:

$$E = 1.1698 \times (380)^{-0.2230}$$
$$E = 0.31 \text{ lb/million Btu}$$

This value of E is used in the equation for regulation 15A NCAC 02D .0503, in Section V.A, above. Compliance with this standard is demonstrated as also described in Section V.A, above. No changes to the permit are being made with this renewal.

C. 15A NCAC 02D .0508: Particulates from Pulp and Paper Mills

This regulation applies to recovery furnaces, smelt dissolving tanks, and lime kilns as follows:

- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021) – the recovery furnaces are subject to a particulates emission limit of 3.0 pounds per equivalent ton of air dried pulp (TADP). In addition, since the No. 11 recovery furnace was constructed after July 1, 1971, it is subject to the visible emissions limit of 35 percent opacity when averaged over a six-minute period [02D .0508(b)]. Under this regulation, 6-minute averaging periods may exceed 35 percent if no 6-min period exceeds 89 percent opacity, no more than 1 six-minute period exceeds 35 percent opacity in one hour, and no more than 4 6-minute periods exceed 35 percent in any 24-hour period.
- Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024) – the smelt dissolving tanks are subject to a particulates emission limit of 0.6 pounds per TADP.
- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029) – the lime kilns are subject to a particulates emission limit if 0.5 pounds per TADP.

Compliance with the particulates emission limits under this rule for all of these sources, except for the No. 4 Lime Kiln, is demonstrated by following the compliance requirements under Subpart MM. See Section VI.B, below, for details of the compliance requirements for the recovery furnaces, smelt dissolving tanks, and No. 5 Lime Kilns. No changes to these requirements are necessary as a part of this renewal.

The PM limitation under 02D .0508 is for total PM. For the No. 4 Lime Kiln, performance testing has demonstrated that scrubber parameter ranges associated with the filterable portion of PM (as required under Subpart MM) do not ensure compliance with total PM when primarily natural gas is combusted. Therefore, in order to ensure compliance with the total PM limits when natural gas is being fired, the permit has been modified to require that Blue Ridge Paper conduct a performance test on the No. 4 Lime Kiln to represent the operating scenario where natural gas combustion provides more than 50 percent of the heat input to the kiln.

Subpart MM compliance demonstration will still apply to the No. 4 Lime Kiln when No. 6 fuel oil provides more than 50 percent of the heat input to the kiln.

D. 15A NCAC 02D .0515: Particulates from Miscellaneous Industrial Processes

This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equation:

For process rates up to 30 tons per hour:
$E = 4.10(P)^{0.67}$

For process rates greater than 30 tons per hour:
$E = 55.0(P)^{0.11} - 40$

Where: E = Allowable emission rate in pounds per hour
P = Process weight in tons per hour

The following emission sources are subject to regulation under 02D .0515:

- No. 5 Lime Silo Dust Collection System (ID No. G09032) – particulate emissions from the lime silo dust collection system are controlled using a bagfilter (ID No. 09-CD-013-01). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.
- No. 6 Lime Silo Dust Collection System (ID No. G09031) – particulate emissions from the lime silo dust collection system are controlled using a bagfilter (ID No. 09-CD-018-01). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.
- Nos. 5 and 6 Lime Slakers (ID Nos. G10035 and G10034) – particulate emissions from the lime slakers are controlled using natural draft scrubbers (ID No. 10-CD-027-01 and 10-CD-036-01). Compliance is demonstrated by monitoring the scrubbing liquid flow rate. The slaker scrubbers are equipped with a flowmeter and compliance is demonstrated by maintaining the scrubbing liquid flowrate above the operating parameters set during performance tests.
- Riley Bark Boiler Fuel Feed System and associated transfer cyclones (ID No. G11044) – particulate matter uncontrolled (the cyclones do not act as control devices). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal cyclone inspection, maintenance, recordkeeping, and reporting.
- Utility Boiler Flyash Handling System (ID No. G11045) – particulate matter is controlled by a bin vent bagfilter (ID No. 11-CD-021-01) and one cyclone separator with bagfilter (ID No. 11-CD-021-02). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.
- No. 4 Power Boiler Flyash Transfer Silo (ID No. G11025) – particulate matter is controlled by one bin vent bagfilter (ID No. 11-CD-021-03). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.
- East, West, and Center Starch Storage Silos (ID Nos. G13054, G13055, and G13056) – particulate matter emissions from these storage silos are controlled by bagfilters on the east and center silos (ID Nos. 13-CD-014-01 and 13-CD-020-01) and a bin vent filter on the west silo (ID No. 13-CD-016-01). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.
- Rewinders on Trim Systems Nos. 1 and 2 (ID Nos. G19058 and G19059) – Blue Ridge Paper is required to maintain production records in tons per hour. No reporting is required.
- Coal processing and conveying, including Crusher (ID No. G11052), coal conveying storage system equipment (ID No. G11053) – Blue Ridge Paper is required to maintain production records in the format of the equation above. No reporting is required.
- No. 4 Boiler Bunker (ID No. G11054) – particulate matter is controlled by three bagfilters (ID Nos. CD-013-011, CD-013-013, and CD-013-015). Compliance is demonstrated by monthly visual inspection of ductwork, annual internal bagfilter inspection, maintenance, recordkeeping, and reporting.

No changes to the requirements of this rule in the permit are necessary as part of this renewal.

The current Permit (T18) has a condition for particulate emissions from the White Liquor Oxidation System (ID No. G04011). According to comments submitted by Blue Ridge Paper on the preliminary draft permit in

January 2016, the white liquor oxidizer does not emit particulate. Therefore, the 02D .0515 condition will be removed from Section 2.1 D of the permit.

E. 15A NCAC 02D .0516: Sulfur Dioxide emissions from Combustion Sources

This regulation applies to any source of combustion that emits sulfur dioxide, which is formed by the combustion of sulfur in fuels, wastes, ores, and other substances. This rule does not apply to sources subject to sulfur dioxide standards in NSPS and MACT standards under 02D .0524 and .1111, respectively. The No. 4 Power Boiler is subject to sulfur dioxide standards under NSPS Subparts D and is therefore not subject to 02D .0516.

Sources subject to this standard have an emission limit of 2.3 pounds of sulfur dioxide per million BTU heat input. The following emission sources at the Blue Ridge Paper mill are subject to this rule:

- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021) – Compliance with this regulation is demonstrated by fuel supplier sampling when No. 6 fuel oil is being combusted in these units.
- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029) – Compliance with this regulation is demonstrated by fuel supplier sampling when No. 6 fuel oil is being combusted in these units.
- Big Bill, Peter G, and Riley Coal utility boilers (ID Nos. G11037, G11038, and G11039) – Compliance with this regulation is demonstrated by fuel supplier sampling when coal is being combusted in these units.
- Riley Bark boiler (ID No. G11042) – Compliance with this regulation is demonstrated by fuel supplier sampling when coal is being combusted in this unit.
- Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051) – These sources only combust natural gas, which has inherently low sulfur content. Therefore, no monitoring, recordkeeping, or reporting is required for these sources.
- Diesel-fired emergency generator (ID No. 16-CU-001) – This source combusts diesel fuel, which has inherently low sulfur content. Therefore, no monitoring, recordkeeping, or reporting is required for this source.

When natural gas and No. 2 oil are combusted in sources that also fire other fuels (e.g., No. 6 oil and coal), there are no monitoring, recordkeeping, and reporting requirements. No changes to the permit are necessary as part of this renewal.

F. 15A NCAC 02D .0519: Control of Nitrogen Dioxide and Nitrogen Oxides Emissions

This regulation limits nitrogen oxide emissions from oil- or gas-fired boilers and coal-fired boilers with maximum heat input capacity of 250 million Btu/hr or more. The following emission sources are subject to this rule:

- Big Bill, Peter G, and Riley Coal utility boilers (ID Nos. G11037, G11038, and G11039) – these three boilers are subject to the 1.8 pounds NO_X per million Btu of heat input emission limit when burning coal.
- No. 4 Power Boiler (ID No. G11040) – this boiler is subject to the 1.8 pounds of NO_X per million Btu of heat input emission limit when burning coal and the 0.8 pounds of NO_X per million Btu of heat input emission limit when burning fuel oil. When burning a combination of coal and oil, 02D .0519 provides an equation to calculate the NO_X limit as a function of heat input from each of these fuels.
- Riley Bark Boiler (ID No. G11042) – this boiler is subject to the 1.8 pounds of NO_X per million Btu of heat input emission limit when burning coal and the 0.8 pounds of NO_X per million Btu of heat input emission limit when burning fuel oil (an equation is used to determine the NO_X limit when burning a combination of oil and fuel). When burning a combination of coal and oil, 02D .0519 provides an equation to calculate the NO_X limit as a function of heat input from each of these fuels.

No testing, monitoring, recordkeeping, or reporting is required under this regulation. No changes to the permit are required as a part of this renewal.

G. 15A NCAC 02D .0521: Control of Visible Emissions

This regulation applies to fuel burning operations and industrial processes where visible emissions can be reasonably expected to occur. Sources subject to visible emissions standards under specifically identified rules under 02D (including .0508, .0524, and .1111) are required to meet the standards of those rules instead of the standards in 02D .0521. Therefore, the No. 4 Power Boiler [02D .0524, NSPS Subpart D, 60.42(a)(2)], and the

Nos. 10 and 11 Recovery Furnaces [02D .1111, MACT Subpart MM, 63.864(k)] are subject to visible emissions limits and are not subject to 02D .0521. The current permit (T18) contains a condition for the No. 10 Recovery Furnace (Section 2.1 K.3) under 02D .0521. Therefore, this condition will be removed as a part of this renewal.

Sources manufactured prior to July 1, 1971, have a visible emissions limit of 40 percent opacity when averaged over a 6-minute period. The 6-minute averaging periods may exceed 40 percent if no 6-min periods exceeds 90 percent opacity, no more than one six-minute period exceeds 40 percent opacity in one hour, and no more than four 6-minute periods exceed 40 percent in any 24-hour period. The following sources are subject to the 40-percent opacity visible emissions standard:

- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029) – To demonstrate compliance with this regulation, Blue Ridge Paper is required to monitor the visible emissions from the lime kilns on a daily basis.
- Big Bill, Peter G, and Riley Coal Utility Boilers (ID Nos. G11037, G11038, and G11039) – To demonstrate compliance with this regulation, Blue Ridge Paper operates and maintains a continuous opacity monitoring system (COMS) to monitor and record opacity.
- Riley Bark Boiler (ID No. G11042) –Blue Ridge Paper operates a scrubber for particulate control and demonstrates compliance with this regulation using particulates as a surrogate for opacity emissions. A performance test is required to establish compliance with the opacity standard and establish the scrubbing liquid and pressure drop operating parameters.
- Rewinders on Trim Systems Nos. 1 and 2 (ID Nos. G19058 and G19059) – compliance is demonstrated with this visible emissions limit by conducting monthly observations for any visible emissions above normal. Records of the observations must be maintained and submitted in the semiannual summary report.

Sources manufactured after July 1, 1971, have a visible emissions limit of 20 percent opacity when averaged over a 6-minute period. The 6-minute averaging periods may exceed 20 percent if no 6-min periods exceeds 87 percent opacity, no more than one six-minute period exceeds 20 percent opacity in one hour, and no more than 4 6-minute periods exceed 20 percent in any 24-hour period. Compliance with this standard is demonstrated by conducting either daily, weekly, or monthly stack observations.

The Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024) are subject to the 20 percent opacity requirements under 02D .0521 and weekly observations, recordkeeping, and reporting. The diesel-fired emergency generator (ID No. 16-CU-001) and the Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051) are subject to the 20 percent opacity visible emissions standard, but there are no monitoring, recordkeeping, or reporting requirements for these units.

In addition to these sources, the following sources are required to conduct monthly observations to ensure compliance with the 20 percent opacity visible emissions standard, along with recordkeeping and reporting.

- No. 5 Lime Silo Dust Collection System (ID No. G09032)
- No. 6 Lime Silo Dust Collection System (ID Nos. G09031)
- Nos. 5 and 6 Lime Slakers (ID Nos. G10035 and G10034)
- Riley Bark Boiler Fuel Feed System (ID No. G11044), Utility Boiler Flyash Handling System (ID No. G11045), and No. 4 Power Boiler Flyash Transfer Silo (ID No. G11025)
- East, West, and Center Starch Storage Silos (ID Nos. G13054, G13055, and G13056)

No additional changes to the visible emissions requirements are necessary under this renewal.

The current Permit (T18) has a condition for visible emissions from the White Liquor Oxidation System (ID No. G04011). According to comments submitted by Blue Ridge Paper on the preliminary draft permit in January 2016, the white liquor oxidizer does not have a potential to emit visible emissions. Therefore, the 02D .0515 condition will be removed from Section 2.1 D of the permit.

H. 15A NCAC 02D .0524: New Source Performance Standards

Blue Ridge Paper is subject to the following new source performance standards (NSPS) under 40 CFR Part 60:

- Subpart D – One boiler, No. 4 Power Boiler (ID No. G11040), is subject to particulate, SO_2, NO_X, and visible emissions standards under the NSPS for Fossil-Fuel-Fired Steam Generators.
- Subpart Db – Two boilers, Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051), are subject to NO_X standards under the NSPS for Industrial-Commercial-Institutional Steam Generating Units.

- Subpart Y – The coal processing and conveying equipment, including crusher (ID No. G11052), coal conveying storage system equipment (ID No. G11053), and No. 4 boiler bunker (ID No. G11054) are subject to visible emissions standards under the NSPS for Coal Preparation and Processing Plants.
- Subpart BB – The foul condensate collection system (ID No. G07018) is subject to TRS standards and the Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024) are subject to particulate matter and TRS standards under the NSPS for Kraft Pulp Mills.

See Section VI.A, below, for a detailed discussion regarding NSPS requirements.

I. 15A NCAC 02D .0528: Total Reduced Sulfur from Kraft Pulp Mills

This regulation applies to recovery furnaces, digester systems, multiple-effect evaporator systems, lime kilns, smelt dissolving tanks, and condensate stripping systems of kraft pulp mills not subject to 15A NCAC 02D .0524. The following sources are subject to regulation 02D .0528.

- Digester Area (ID No. G02004), including each batch digester and associated flash tanks, blow tanks, chip steamers, and condensers – The digester area is limited to 5 parts per million by volume dry basis (ppmvd), measured as hydrogen sulfide (H_2S) averaged per discrete contiguous 12-hour time periods. The emissions from the digester area are controlled by combustion in the Nos. 4 or 5 Lime Kilns and Blue Ridge Paper is required to inspect the closed vent system.
- Black Liquor Evaporator Systems (ID No. G07016) – The black liquor evaporators and their associated hotwells are limited to 5 ppmvd, measured as H_2S, averaged per discrete contiguous 12-hour time periods. The emissions from the black liquor evaporators are controlled by combustion in the Nos. 4 or 5 Lime Kilns and Blue Ridge Paper is required to inspect the closed vent system.
- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021) – The recovery furnaces are new design recovery furnaces [as defined in 02D .0528(a)(7)] and are limited to 5 ppmvd measured as H_2S, corrected to 8 percent oxygen and averaged per discrete contiguous 12-hour time periods. One percent of all 12-hour TRS averages per quarter year in excess of the 5-ppmvd TRS limit, in the absence of startups, shutdowns, and malfunctions, are not considered a violation. Blue Ridge Paper demonstrates compliance with the recovery furnace limit by operating, and maintaining the continuous monitoring system for TRS, as H_2S.
- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029) – The lime kilns are limited to 20 ppmvd measured as H_2S, corrected to 10 percent oxygen and averaged per discrete contiguous 12-hour time periods. Two percent of all 12-hour TRS averages per quarter year in excess of the 20-ppmvd TRS limit, in the absence of startups, shutdowns, and malfunctions, are not considered a violation. Blue Ridge Paper demonstrates compliance with the recovery furnace limit by operating, and maintaining the continuous monitoring system for TRS, as H_2S.

No changes to these conditions are required as a part of this renewal.

The Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024) have been reconstructed and are now subject to 15A NCAC 02D .0524, new source performance standards (NSPS) for kraft pulp mills, 40 CFR Part 60, Subpart BB. Therefore, the smelt dissolving tanks are no longer subject to 02D .0528 and the associated conditions were removed from the permit.

J. 15A NCAC 02D .0530: Prevention of Significant Deterioration

As a kraft paper mill, Blue Ridge Paper is one of the 28 source categories listed in the federal prevention of significant deterioration (PSD) regulation as being subject to regulation with potential emissions greater than 100 tpy of any PSD-regulated pollutant. The mill is a major source under PSD for several pollutants. Based on a previously conducted Final BACT Determination, the coal conveying storage system is required to be enclosed and equipped with a dust suppression system. In addition, the Blue Ridge Paper mill has operational restrictions on the following sources:

- Big Bill, Peter G, and Riley Coal utility boilers (ID Nos. G11037, G11038, and G11039), and
- No. 4 Power Boiler (ID No. G11040)

The current permit (No. 08961T18) contains two conditions under 02D .0530(u) for the use of projected actual emissions to avoid applicability of PSD requirements. These conditions apply to the following sources:

- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021)
- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029)
- Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051)

See Section VI.C for a detailed discussion on PSD conditions in the permit.

K. 15A NCAC 02D .0606: Sources Covered by Appendix P of 40 CFR Part 51

This regulation applies to fossil fuel-fired steam generators required to install continuous emission monitoring systems (CEMS) or continuous opacity monitoring systems (COMS) to comply with state regulations and specifies the minimum monitoring requirements. Sources subject to NSPS under 02D .0524 are exempt from 02D .0606. The following addresses sources potentially subject to these monitoring requirements:

- Big Bill, Peter G, and Riley Coal Utility Boilers (ID Nos. G11037, G11038, and G11039) – each of these boilers is required to install a COMS under Appendix P. A continuous monitor for sulfur dioxide emissions is not required because Blue Ridge Paper complies with the sulfur dioxide emission standards using fuel supplier certification and is exempt from the monitoring requirements under 02D .0606(d). A CEMS for NO_X emissions is not required because the boilers do not meet the size cutoff for this requirement.
- Riley Bark Boiler (ID No. G11042) – Blue Ridge Paper requested and was approved for alternative opacity monitoring from this boiler under 15A NCAC 02D .0612. As a result, Blue Ridge Paper was not required to install a COMS and instead monitors scrubbing liquid flow rate and pressure drop across the scrubber. See the Air Permit Review for Permit Application No. 4400159.14A for a more detailed discussion of this requirement.
- No. 4 Power Boiler (ID No. G11040) – This power boiler is subject to 40 CFR Part 60, Subpart D, and thus 02D .0524. Therefore, the No. 4 Power Boiler is exempt from 02D .0606.

Excess emissions reports are required to be submitted on a quarterly basis. No changes to this permit are required as a part of this renewal.

L. 15A NCAC 02D .0608: Other Large Coal or Residual Oil Burners

Under this regulation, Permittees are required to determine sulfur dioxide emissions to the air if the emissions unit combusts coal or residual oil, is not subject to 02D .0524 or 02D .0606, has a total heat input of more than 250 million Btu per hour from coal and residual oil, and has a capacity factor greater than 30 percent. This regulation specifies the required sulfur dioxide monitoring for the following sources at Blue Ridge Paper that are subject to 02D .0608:

- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021) – Compliance with this regulation is demonstrated by fuel supplier sampling when No. 6 fuel oil is being combusted [15A NCAC 02D .0608(f)]. When natural gas and No. 2 oil are combusted, there are no monitoring, recordkeeping, and reporting requirements.
- Big Bill, Peter G, and Riley Coal Utility Boilers (ID Nos. G11037, G11038, and G11039) – compliance with this regulation is demonstrated by fuel supplier certification when coal is being fired in the boilers [15A NCAC 02D .0608(f)].
- Riley Bark Boiler (ID No. G11042) – compliance with this regulation is demonstrated by fuel supplier certification when coal is being fired in the boilers [15A NCAC 02D .0608(f)].

Blue Ridge Paper is required to keep records of the SO_2 emission rate calculation and fuel supplier certifications and submit semiannual summary reports. No changes to the permit are necessary as part of this renewal.

M. 15A NCAC 02D .1111: Maximum Achievable Control Technology

Blue Ridge Paper is subject to the following maximum achievable control technology (MACT) standards:

- Subpart S – the following sources are subject to MACT standards under the national emissions standards for hazardous air pollutants (NESHAP) from the Pulp and Paper Industry under 40 CFR Part 63:
  - Digester Area (ID No. G02004)
  - No. 1 Hardwood and No. 2 Pine Brownstock Washing Systems (ID Nos. G03005 and G03006)
  - No. 1 Hardwood and No. 2 Pine Oxygen Delignification Systems (ID Nos. G04009 and G04010)
  - No 1 Hardwood and No. 2 Pine Fiberline Bleaching Systems (ID Nos. G05012 and G05013)
  - Black Liquor Evaporator Systems (ID No. G07016)
  - Foul Condensate System (ID No. G07018)
  - Black Liquor Oxidation System (ID No. G08022)
  - No. 1 Hardwood Turpentine Recovery System (ID No. G20060) and No. 2 Pine Turpentine Recovery System (ID No. G200062)
  - No. 1 Hardwood Fiberline Deckers (ID No. G24087) and No. 2 Pine Fiberline Deckers (ID No. G24088)
  - No. 1 Hardwood and No. 2 Pine Fiberline Pulp Screening Systems (ID Nos. G04025 and G04026)

- Subpart MM – the following sources are subject to the MACT standards under the NESHAP for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills under 40 CFR Part 63:
  - Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021),
  - Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024),
  - Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029)
- Subpart ZZZZ – the diesel-fired emergency generator (ID No. 16-CU-001) is subject to the notification requirements of the NESHAP for Stationary Reciprocating Internal Combustion Engines under 40 CFR Part 63.
- Subpart DDDDD[4] – on May 20, 2019, five boilers (ID Nos. G11037, G11038, G11039, G11040, and G11042) and the natural gas/propane hot oil heaters installed on the no. 19 paper machine (ID No. G12077) will be subject to the MACT standards under the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The Nos. 1 and 2 Package Boilers will be subject to Subpart DDDDD upon startup.

See Section VI.B for a detailed discussion of the NESHAP requirements.

N. 15A NCAC 02D .2100: Risk Management Program

The Chlorine Dioxide Generation System (ID No. G06014) is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68. The Permittee is required to revise and update the risk management plan submitted under 40 CFR 68.150 according to the requirements specified in 68.190(b)(2) through (b)(7). This permit action does not affect this status. However, as part of this permit renewal, the 112(r) language has been modified to indicate the date of the most recent plan revision and the next renewal date.

O. 15A NCAC 2Q .0317: Avoidance Conditions for 15A NCAC 02D .0530, Prevention of Significant Deterioration

Blue Ridge Paper has accepted permit conditions to limit SO_2 emissions from Big Bill, Peter G, and Riley Coal utility boilers (ID Nos. G11037, G11038, and G11039), and No. 4 Power Boiler (ID No. G11040) per consecutive 12-month period to avoid 15A NCAC 02D .0530, Prevention of Significant Deterioration (PSD).

Blue Ridge Paper has also requested avoidance conditions to limit SO2 and sulfuric acid mist emissions from the black liquor oxidation system (ID No. G08022) per consecutive 12-month period to avoid 15A NCAC 02D .0530, PSD.

See Section VI.B for further discussion regarding these PSD avoidance conditions.

P. 15A NCAC 02D .1109: 112(j) Case-by-Case Maximum Achievable Control Technology

Blue Ridge Paper currently has Case-by-Case MACT provisions under 112(j) for: (1) startup, shutdown, and malfunction (SSM) provisions under Subparts S and MM; and (2) Boiler MACT provisions under Subpart DDDDD. The following discussion addresses these provisions.

Startup, Shutdown and Malfunction for Subparts S and MM

On December 19, 2008, the U.S. Court of Appeals for the D.C. Circuit vacated two MACT general provisions related to SSM events. The vacated provisions provide an exemption from otherwise applicable emission standards during SSM periods. Prior to the vacatur, the provisions had been incorporated by reference into several source-specific MACT rules, including Subpart S (Pulp and Paper Industry) and Subpart MM (Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills). Therefore, sources within those MACT categories were exempt from the applicable Subpart S and Subpart MM emissions standards during all SSM events.

It is DAQ policy to consider a rule that is promulgated, followed by a vacatur of that rule, to be failure to promulgate. As a result, the vacatur of the SSM provisions in Subpart A triggers 112(j) provisions. In their 2012 permit application (No. 4400159.12A), Blue Ridge Paper requested that 112(j) SSM provisions be added to the permit for sources subject to Subparts S and MM (Permit No. 08961T15, issued April 2012). Only sources subject to

[4] NOTE: On July 29, 2016, the US Court of Appeals issued a decision that vacated certain portions of the Boiler MACT, Subpart DDDDD. As of September 19, 2016, the mandate has not been issued. As a result, the permit has not been changed to reflect the vacatur at this time.

numerical emission limitations were impacted by the removal of the exemptions during SSM. The sources affected by the SSM provisions under Subpart S, and therefore subject to the 112(j) conditions were the No. 1 Hardwood Fiberline Bleaching System, and the No. 2 Pine Fiberline Bleaching System. For Subpart MM, the 112(j) conditions apply to the recovery furnaces, smelt dissolving tanks, and lime kilns.

Since that time, on September 11, 2012, EPA finalized amendments to Subpart S, which addressed the SSM issues within the Pulp and Paper NESHAP (77 FR 55698). The amendments to Subpart S eliminate the SSM exemptions from the rule. A general duty requirement was added, which specified that sources must be in compliance with the standards at all times. In addition, sources are no longer required to develop an SSM plan, and EPA added an affirmative defense to civil penalties for violations of emissions standards that are caused by malfunctions.

With the promulgation of the Subpart S amendments, the applicability of the CAA §112(j) requirements will sunset and then the Permittee will have to comply with the CAA §112(d) standard, pursuant to 40 CFR 63.56(b). Under 40 CFR 63.56(b), the permitting authority is required to incorporate requirements of that standard in the Title V permit upon its next renewal and establish a compliance date that assures the Permittee must comply with the promulgated standard within a reasonable time, but not longer than 8 years after the standard is promulgated or the Permittee was first required to comply with the case-by-case standard, whichever is earlier.

Since this is the "next renewal" after the promulgation, the Subpart S amendments will be incorporated into this revised permit. The effective date of the Subpart S amendments was September 11, 2012. Therefore, the sunset date of the 112(j) provisions would be no later than September 11, 2020. Prior to the sunset date, Blue Ridge Paper will continue to comply with the work practices established under 112(j) SSM provisions. See Attachment 1 for a summary of how the SSM language will be impacted.

At the date of this permit renewal, EPA has not proposed amendments to the SSM provisions under Subpart MM. Therefore, no changes to the 112(j) provisions in this permit, as they relate to Subpart MM, will be made as a part of this renewal.

Boiler MACT

Similar to the SSM provisions discussed above, Blue Ridge Paper also has 112(j) provisions applicable to their boilers and processes heaters:

- Big Bill utility boiler (ID No. G11037);
- Peter G utility boiler (ID No. G11038);
- Riley Coal utility boiler (ID No. G11039);
- No. 4 Power Boiler (ID No. G11040);
- Riley Bark boiler (ID No. G11042); and
- Hot oil heaters on the No. 19 paper machine (ID No. G12077).

With the promulgation of 40 CFR Part 63 Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters," the applicability of the CAA §112(j) requirements will sunset and then the Permittee will have to comply with Subpart DDDDD pursuant to 40 CFR 63.56(b). As discussed above under SSM, DAQ is required to incorporate the requirements of Subpart DDDDD in the title V permit upon its next renewal and establish a compliance date that is not longer than 8 years after the standard is promulgated or the Permittee was first required to comply with the case-by-case standard, whichever is earlier.

The effective date of the MACT 5D was May 20, 2011 (76 FR 15662) and 8 years after date of promulgation was determined to be the appropriate date to choose for the Subpart DDDDD compliance date. Consistent with §63.56(b), the Permittee will be required to comply with MACT 5D on May 20, 2019 (eight calendar years after May 20, 2011). However, Blue Ridge Paper announced in January 2015,[5] that they are going to decommission two of their coal-fired boilers and replace them with natural gas-fired boilers. This project will require a significant permit modification at which time the applicable Subpart DDDDD requirements will be added to the permit for the five boilers. See Section VI.B for more details on the Subpart DDDDD requirements as they apply to the hot oil heaters.

STATE ONLY REQUIREMENTS

[5] Press Release. PPI Forest Bio-Insight. "Blue Ridge Paper Products to convert coal-fired boilers to natural gas at Haywood County." January 7, 2015. http://www.paperage.com/2015news/01_06_2015blue_ridge_paper_jmac_grant.html

Q. 15A NCAC 02D .1100: Control of Toxic Air Pollutants

Blue Ridge Paper has facility-wide permit limits for several pollutants: acetaldehyde, formaldehyde, manganese, and phenol (see Table in Section 2.3 A.1 of the current permit, No. 08961T18). The following emissions units were included in the toxics evaluation:

- Digester Area (ID No. G02004)
- Brownstock Washing Systems (ID Nos. G03005 and G03006)
- Oxygen Delignification Systems (ID Nos. G04009 and G04010)
- White Liquor Oxidation System (ID No. G04011)
- Bleaching Systems (ID Nos. G05012 and G05013)
- Chlorine Dioxide Generation System (ID No. G06014)
- Black Liquor Evaporator Systems (ID No. G07016)
- Heavy Black Liquor Storage Tanks (ID No. G07019)
- Weak Black Liquor Storage Tanks (ID No. G07086)
- Foul Condensate System (ID No. G07018)
- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021)
- Black Liquor Oxidation System (ID No. G08022)
- Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024)
- Lime Production – Other Units (ID Nos. G09027.4 through G09027.6)
- Nos. 11, 12, 19, and 20 Paper Machines (ID Nos. G12051, G12050, G12049, and G12048)
- WTP Primary Clarifier (ID No. G16081)
- Tall Oil Reactor (ID No. G21072)

As a part of this renewal, these limits are being evaluated. A detailed discussion of the NC Air Toxics is found in Section VII.

R. 15A NCAC 2Q .0711: Emission Rates Requiring a Permit

Blue Ridge Paper previously triggered a toxics review for several TAP. A detailed discussion of the NC Air Toxics is found in Section VII.

VI. Regulatory Review - Federal Rules (NSPS, NESHAP/MACT, NSR/PSD, 112(r), CAM)

A. New Source Performance Standards

Blue Ridge Paper is subject to the following NSPS under 40 CFR Part 60: Subpart D, Subpart Db, Subpart Y, and Subpart BB. The following is a summary of each of these subparts.

40 CFR Part 60, Subpart D: NSPS for Fossil-Fuel-Fired Steam Generators

The No. 4 Power Boiler (ID No. G11040) is subject to particulate, SO_2, NO_X, and visible emissions standards under Subpart D. To demonstrate compliance with the Subpart D requirements, Blue Ridge Paper is required to conduct annual particulate emissions testing, conduct fuel sulfur monitoring, and install continuous monitoring systems for NO_X and opacity. If reduced testing frequency is allowed, Blue Ridge Paper would be able to test once every five years. Because the typical permit term is five years, the current permit stated that the reduced frequency testing would be allowed once every permit term. To ensure that not more than five years elapse between tests, the permit was revised to specify that if reduced frequency testing is allowed, they would be every five years, not to exceed 61 months. No additional changes to the permit are necessary as part of this renewal.

40 CFR Part 60, Subpart Db: NSPS for Industrial-Commercial-Institutional Steam Generating Units

This rule applies to industrial, commercial, and institutional steam generating units constructed, modified or reconstructed after June 9, 1984, and regulates SO_2, PM (including opacity), and NO_X emissions from boilers with maximum design capacity of 100 million Btu per hour or greater. None of the existing boilers at the mill were installed after June 9, 1984. Blue Ridge Paper is currently in the process of installing the Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051) and they will be subject to Subpart Db. Blue Ridge Paper will be required to comply with Subpart Db upon startup of the Nos. 1 and 2 Package Boilers.

The SO_2 and PM (and opacity) standards in Subpart Db do not apply to boilers that fire only natural gas. Therefore, only the NO_X standards under Subpart Db apply to the Nos. 1 and 2 Package Boilers. Under Subpart Db, the NO_X emissions from the package boilers are limited to 0.10 lb/MMBtu on a 30-day rolling average basis and compliance is required at the time of initial startup. The initial performance test is required within 60 days after achieving the maximum production rate, but before 180 days after initial startup.

In order to comply with Subpart Db upon startup, Blue Ridge Paper will be required to install a NO_X continuous emissions monitoring system (CEMS) on each boiler. Data from the CEMS will be used to calculate the 30-day rolling average NO_X emissions to demonstrate compliance with the limit. Recordkeeping and reporting requirements are also included.

40 CFR Part 60, Subpart Y: NSPS for Coal Preparation and Processing Plants

The NSPS for coal preparation and processing plants applies to affected facilities that process more than 200 tons per day of coal. Affected facilities include coal processing and conveying equipment, including breakers and crushers and coal storage systems modified after October 27, 1974. Some of the requirements apply only to sources constructed after April 28, 2008, and others (i.e., open storage piles) constructed after May 27, 2009. The following were identified as affected facilities:[6]

- Crusher (ID No. G11052) - modified after April 28, 2008; and
- Coal Conveying and Storage System Equipment (Conveyor System and No. 4 Boiler Bunker, ID Nos. G11053 and G11041, respectively) – modified/constructed prior to April 28, 2008.

These sources are subject to visible emissions standards under Subpart Y. Visible emissions from the crusher are limited to 10 percent opacity and the visible emissions from the Coal Conveying and Storage System Equipment are limited to 20 percent opacity. The Subpart Y compliance demonstration for the Crusher is annual visible emissions readings using Method 9 (as specified in 40 CFR 60.257), with a more frequent, i.e., within 90-days reading required if the visible emissions are more than 5 percent opacity.

The current permit has a requirement for monthly visible emissions observations (Section 2.1 FF.2.e). However, Subpart Y does not have an underlying requirement for periodic monitoring of sources modified/constructed prior to April 28, 2008, which includes the Conveyor System and the No. 4 Boiler Bunker. Removing this requirement from the permit was considered. However, it was determined that it was not appropriate for these dust sources to have an opacity standard but no monitoring. As allowed under 02Q .0508(f), we modified the existing monthly requirement to be more similar to the 02D .0521 requirements.

No further changes to the Subpart Y conditions in the permit were necessary as a part of this renewal.

40 CFR Part 60, Subpart BB: NSPS for Kraft Pulp Mills

The Kraft Pulp Mill NSPS applies to the following affected facilities: each Digester system, each brownstock washer system, each multiple-effect evaporator system, and each recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system constructed, reconstructed, or modified after September 24, 1976. At the Blue Ridge Paper Mill, the Foul Condensate System (ID No. G07018) and the Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024) are subject to particulate matter and TRS standards under the NSPS for Kraft Pulp Mills.

- The Foul Condensate System is subject to the TRS limit of 5 parts per million by volume (ppmv), corrected to 10 percent oxygen. Compliance with this limit is demonstrated by combusting the waste gases in either the No. 5 Lime Kiln or the No. 4 Lime Kiln and monitoring the combustion temperature of the kilns, as well as recordkeeping and reporting.
- The Nos. 10 and 11 Smelt Dissolving Tanks are subject to a particulate matter emissions limit of 0.2 pounds per ton black liquor solids (TBLS), dry weight and a TRS emissions limit of 0.033 lb/TBLS, as H_2S. Compliance with the particulate matter emissions limit is demonstrated by operating and maintaining a scrubber and monitoring scrubber parameters, in addition to periodic compliance testing, recordkeeping, and reporting. Subpart BB does not contain monitoring requirements for TRS emissions from smelt dissolving tanks. Under authority of 15A NCAC 02Q .0508(f) periodic testing is included in the permit for TRS compliance demonstration.

No further changes to the Subpart BB conditions are necessary as a part of this renewal.

[6] See Air Permit Review for 08961T12 for details on construction and modification dates.

B. National Emissions Standards for Hazardous Air Pollutants

Blue Ridge Paper is subject to NESHAP under 40 CFR Part 63: Subpart S, Subpart MM, Subpart ZZZZ. and Subpart DDDDD. The following is a summary of each of these subparts and the applicable requirements.

40 CFR Part 63, Subpart S: NESHAP from the Pulp and Paper Industry

The pulp and paper NESHAP applies to the pulping and bleaching systems at chemical pulp mills. Affected sources are required to control HAP emissions using the MACT. The MACT standards require mills to reduce HAP emissions, in general, by collecting and incinerate pulping process vent emissions; collecting and controlling bleaching process vent emissions with a caustic scrubber, eliminate the use of certain bleaching chemicals, and collect and treat process condensate streams to remove HAPs. Several changes to Section 2.2 C of the permit were made that were mostly editorial in nature and were intended to clarify the applicable requirements with which Blue Ridge Paper was already complying. No changes in applicability of the Subpart S requirements were made as a part of this renewal.

Equivalency by Permit

North Carolina has authority under 40 CFR 63.94 to approve "equivalency by permit" (EBP) provisions for Subpart S. In 2007, Blue Ridge Paper was granted the "equivalency by permit" option for the pulp washing systems and O2 delignification systems that are subject to MACT Subpart S and otherwise would be subject to emission control requirements. The facility requested that it be allowed to control the emissions of methanol and other HAPs from the Black Liquor Oxidation BLOX Process (ID No. G08022) in lieu of controlling emissions from the pulp washing (ID Nos. G03005 and G03006) and oxygen delignification systems (ID Nos. G04009 and G04010).

Under the EBP conditions, Blue Ridge Paper is required to reduce total HAP emissions from the BLOX system by 98 percent or reduce HAP emissions using a thermal oxidizer with a minimum temperature of 1600°F and minimum residence time of 0.75 seconds. Blue Ridge Paper has installed a thermal oxidizer for the BLOX system that is equipped with a continuous monitoring systems to monitor temperature. Per EPA approval of EBP language (on March 10, 2005), compliance with the EBP is demonstrated by ensuring that the minimum temperature is maintained and ensure that no more than 83 percent of the total pulp production on a 12-month rolling average basis is hardwood pulp. Testing, monitoring, recordkeeping, and reporting requirements are also met to ensure compliance.

Exemption from Control Requirements

Subpart S also allows for exemptions from Subpart S for sources that are low-emitting. Knotters and screen systems with total emissions equal to or greater than 0.3 pounds of total HAP per oven dried ton of pulp (ODTP) are required to be controlled in the high-volume, low concentration (HVLC) system under Subpart S. Similarly, Subpart S requires control of decker systems that use process water with a total HAP concentration greater than 400 parts per million by weight (ppmw). In an exemption analysis submitted in June 2004, Blue Ridge Paper has demonstrated that the knotters and screen systems (ID Nos. G04025 and G04026), and the decker systems, including decker filtrate tanks (ID Nos. G24087 and G24088), are not required to be controlled under Subpart S.

Subpart S Requirements

At the Blue Ridge Paper mill, several sources are subject to Subpart S. The following summarizes the sources subject to Subpart S along with a brief description of the requirements:

- Bleaching systems (ID Nos. G05012 and G05013) – each bleaching stage of the bleaching system where chlorinated compounds are introduced are enclosed and vented to a bleach plant scrubber that achieves an outlet concentration of 10 ppmv or less of total chlorinated HAP. Furthermore, Blue Ridge Paper is prohibited from using hypochlorite or chlorine for bleaching.
- Low-volume, high concentration (LVHC) System Sources – HAP emissions from the LVHC system sources are required to be controlled by being combusted in either the No. 4 or No. 5 Lime Kiln. The LVHC system sources include the following:
    - Foul Condensate System (ID No. G07018)
    - Digester Area (ID No. G02004)
    - Black Liquor Evaporator Systems (ID Nos. G07016); and
    - No. 1 Hardwood Turpentine Recovery System (ID No. G20060) and No. 2 Pine Turpentine Recovery System (ID No. G200062)

Testing and Startup, Shutdown, and Malfunction

As discussed in Section V.Q, above, Subpart S was amended in 2012 and the issues related to the vacated SSM provisions were addressed. Section 2.2 C.1 of the permit was updated to incorporate these new provisions to become effective following the sunset date of the 112(j) provisions. In order to maintain the parity between the EBP and Subpart S, similar SSM language was also added to Section 2.2 C.2.

Another major change to Subpart S was to add the periodic testing requirement in 40 CFR 63.457(a)(2) for the pulping vent gases and bleaching systems. Sources subject to the standards for pulping vent gases and bleaching systems would be required to conduct tests once every five years (or no more than every 60 months).

40 CFR Part 63, Subpart MM: NESHAP for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills

This NESHAP applies to chemical combustion sources located at kraft, soda, sulfite, and stand-alone semichemical pulp mills. The NESHAP has separate emission limits for recovery furnaces, smelt dissolving tanks, and lime kilns. The following sources at the Blue Ridge Paper mill are subject to the existing source standards under Subpart MM:

- Nos. 10 and 11 Recovery Furnaces (ID Nos. G08020 and G08021),
- Nos. 10 and 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024),[7] and
- Nos. 4 and 5 Lime Kilns (ID Nos. G09028 and G09029)

Subpart MM allows existing recovery furnaces, smelt dissolving tanks, and lime kilns that operate over 6,300 hours per year to demonstrate compliance with the particulates standard via a bubble calculation. This alternative limit allows the mill to establish an overall particulate limit that applies to all three emissions unit types and is based on mill-specific data and performance test data. The mill is required to reestablish the bubble calculation limit when and if the air pollution control system is modified or replaced or the emission units are shut down for more than 60 consecutive days.

The Nos. 10 and 11 Recovery Furnaces are equipped with electrostatic precipitators (ESP) and the Nos. 4 and 5 Lime Kilns and Nos. 10 and 11 Smelt Dissolving Tanks are equipped with wet scrubbers for PM control. Blue Ridge Paper has installed a COMS at the outlet of the recovery furnace ESPs to monitor visible emissions. Continuous monitoring systems are also installed on the lime kiln and smelt dissolving tank scrubber outlets to monitor scrubber pressure drop and scrubbing liquid flow rate. Compliance is demonstrated by maintaining the operating parameters within the appropriate ranges as determined during performance tests. Recordkeeping and reporting requirements also apply.

The reporting requirements in the permit were modified to correct some confusion. Section 2.2 D.1.o of the current permit (T18) required Blue Ridge Paper to recalculate the PM emission limit if one of the following occurs: (1) any of the air pollution control devices for the lime kilns, recovery furnaces, or recovery furnace smelt dissolving tanks are modified or replaced; (2) any of the lime kilns, recovery furnaces, or recovery furnace smelt dissolving tanks are shut down for more than 60 consecutive days; or (3) the black liquor solids firing rate for the recovery furnaces during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test. However, according to 40 CFR 63.867(b)(4) the PM limit is not required to be recalculated if the black liquor solids firing rate is increased more than 10 percent above the level measured during the latest performance test. Therefore, this condition was corrected to reflect that only the first two occurrences trigger recalculation of the PM limit.

As discussed in Section V.R, above, Subpart MM has not been amended by EPA to address the SSM vacatur. The permit contains 112(j) conditions for SSM (Section 2.2 G.1 through G.3) as it applies to Subpart MM, but the conditions in Section 2.2 D do not refer to Section 2.2 G. Therefore, a condition was added in Section 2.2 D.1.b to refer to the 112(j) requirements. No further substantive changes were made to the Subpart MM requirements in the permit under this renewal.

40 CFR Part 63, Subpart ZZZZ: NESHAP for Stationary Reciprocating Internal Combustion Engines

[7] Modification of the Nos. 10 and 11 Smelt Dissolving Tanks did not change the existing source status of these units. The affected facility under Subpart MM is the existing chemical recovery system, of which recovery furnaces, smelt dissolving tanks, and lime kilns are a part. The reconstruction of these tanks was determined to be less than 50 percent of the replacement cost of a chemical recovery system. Therefore, the smelt dissolving tanks continue to be subject to the existing source standards under Subpart MM.

Subpart ZZZZ applies to new and existing stationary reciprocating internal combustion engines (RICE) located at both major and area sources. A stationary RICE with site rating greater than 500 brake horsepower (bhp) and located at a major source that does not operate and is not contractually obligated to be available for more than 15 hours per calendar year does not have to meet the requirements of Subpart ZZZZ, except for the initial notification requirements. No changes to the Subpart ZZZZ requirements in the permit are necessary as a part of this renewal.

40 CFR Part 63, Subpart DDDDD: NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Blue Ridge Paper is permitted to operate seven boilers (ID Nos. G11037, G11038, G11039, G11040, G11042, G11050, and G11051) and two natural gas/propane-fired hot oil heaters (ID No. G12077). As discussed above, five of these boilers (ID Nos. G11037, G11038, G11039, G11040, and G11042) and the process heaters are currently subject to Case-by-Case MACT under 112(j). The 112(j) requirements expire on May 19, 2019, at which time the Boiler MACT standards under 40 CFR part 63, subpart DDDDD will apply. As discussed in Section V.Q, above, Blue Ridge Paper will be making major changes to their entire power system prior to 2019[8] and therefore, the conditions for these boilers will not be added to the permit at this time. However, the 112(j) conditions were recently updated in 2014 to account for the EPA's new hybrid suspension grate boiler subcategory. At that time, the PM and CO emission limits in place for biomass were revised. However, the equations in Section 2.2 E.1.a for determining the Riley Bark boiler PM and CO limits when co-firing biomass with other fuels were not corrected for the new biomass emission limits. Therefore, these equations were updated during the renewal process.

The process heaters are currently permitted to burn natural gas and propane and are subject to 112(j). Prior to being permitted under 112(j), these process heaters were on the insignificant activities list due to their low emissions. At the time of the 112(j) standards, sources that were otherwise insignificant activities but were subject to MACT and GACT standards were required to be added to the permit. Since that time, this requirement has changed and the insignificant activities list can include sources subject to MACT and GACT. As a result, the hot oil heaters will no longer be required to be in the permit, although Blue Ridge Paper will still be required to comply with Subpart DDDDD. By May 2019, the Boiler MACT compliance date, we intend to include conditions on our website for facilities with insignificant activities that are subject to the Boiler MACT. Therefore, the hot oil heaters will remain in the permit as being subject to the 112(j) MACT until May 19, 2019. It is recommended that, at the next permit renewal, these sources be added to the insignificant activities table.

The Nos. 1 and 2 Package Boilers will be subject to the Boiler MACT upon startup. The package boilers fire only natural gas and therefore meet the definition of "unit designed to burn gas-1 subcategory." This subcategory is defined to include boilers that burn only natural gas, refinery gas, and/or other gas 1 fuels. The Boiler MACT allows a boiler in this subcategory to burn liquid fuel for no more than 48 hours per year for periodic testing of the liquid fuel, maintenance, or operator training. In addition, fuel oil can be burned during periods of gas curtailment or gas supply interruptions of any duration.

Work Practice Standards: New boilers in the "unit(s) designed to burn gas 1 subcategory" are not subject to emissions limits. The package boilers will be subject to work practices, including periodic boiler tune-ups. According to Permit Application No. 4400159.16A, the boilers may not be equipped with oxygen trim systems. As such, the boilers will have to be tuned-up annually. The first tune-up for the package boilers will have be no more than 13 months after initial startup of the unit [40 CFR 63.7515(d)]. Compliance with the work practice standards will be demonstrated by records documenting the boiler tune-ups.

Notification, Recordkeeping and Reporting Requirements: Blue Ridge Paper will be required to submit notifications if using fuel oil during periods of curtailment or natural gas supply interruptions is necessary. Blue Ridge Paper will be required to maintain records of fuel usage and records associated with demonstration of compliance the work practice standards. Recordkeeping and reporting are also required for boilers in this subcategory.

[8] See Footnote 5.

C. Prevention of Significant Deterioration

PSD Limits on BACT-Affected Sources

As previously discussed, kraft paper mills are listed as one of the 28 source categories under federal PSD regulation as being subject to regulation with potential emissions greater than 100 tpy of any PSD-regulated pollutant. The Blue Ridge Paper mill is a major source under PSD.

The Blue Ridge Paper mill has operational restrictions and emissions limits based on a Final BACT Determination as approved by the Western North Carolina Air Pollution Control Agency on July 27, 1984. The Big Bill, Peter G, and Riley Coal have operational limits that apply to the hourly steam production rate from each boiler. The BACT Determination also resulted in limits on PM, NO_X, SO_2, and CO emissions. The following summarizes the requirements for each pollutant.

- Particulate Matter Emissions:
  - Blue Ridge Paper is required to reduce PM emissions from the coal feed system to the No. 4 Power Boiler (ID No. G11040) by using a dust suppression and an enclosed conveyor system.
  - The No. 4 Power Boiler is subject to a PM limit of 0.085 lb/million Btu.
  - Big Bill, Peter G, and Riley Coal Utility Boilers are each subject to a PM emissions limit of 0.15 lb/million Btu.
- Nitrogen Oxide Emissions
  - Blue Ridge Paper is required to incorporate low excess air in the primary combustion zone of the No. 4 Power Boiler. Staged combustion and tangential firing are also required.
  - The Big Bill, Peter G, and Riley Coal Utility Boilers, and the No. 4 Power Boiler are also limited to NO_X emissions of 4,368 tons per 12-month rolling total.
  - The NSPS NO_X limit on a pound per million Btu basis applies to the No. 4 Power Boiler.
- Sulfur Dioxide
  - Blue Ridge Paper is required to combust low sulfur coal in the No. 4 Power Boiler to reduce SO_2 emissions.
  - The NSPS SO_2 limit on a pound per million Btu basis also applies to the No. 4 Power Boiler.
- Carbon Monoxide
  - Blue Ridge Paper is required to limit the CO emissions from Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler to 898.2 tons per 12-month rolling total.

Compliance with the PSD limits is demonstrated by testing, monitoring, recordkeeping and reporting. No changes to the PSD limits in the permit are necessary as part of this renewal.

PSD Avoidance Conditions

Blue Ridge Paper has two PSD avoidance conditions under 15A NCAC 2Q .0317. The first avoidance condition was approved by the Western North Carolina Air Pollution Control Agency on July 27, 1984, and limits SO_2 emissions from the Big Bill, Peter G, and Riley Coal utility boilers, and the No. 4 Power Boiler. Compliance with this avoidance condition is demonstrated by monitoring fuel usage, keeping records and quarterly reporting.

Under the second avoidance condition (issued by NC DAQ), the black liquor oxidation system is limited to less than 40 tons per consecutive 12-month period of SO_2 and less than 7 tons per consecutive 12-month period of sulfuric acid mist. The emissions are controlled using an RTO scrubber. Compliance is demonstrated by daily monitoring of the pH and scrubbing liquid flow rate and maintaining these parameters above the specified operating ranges, as determined during performance testing. Blue Ridge Paper is also required to calculate the SO_2 monthly to ensure compliance with the limits.

No changes to the PSD avoidance conditions are necessary as part of this renewal.

Use of Projected Actual Emissions to Avoid Applicability of PSD Requirements

The current permit (T18) also contains two condition under 15A NCAC 02D .0530(u) for the use of projected actual emissions to avoid applicability of PSD requirements. Under 40 CFR 51.166(r)(6) and 02D .0530(u), for projects at existing emissions units at a major stationary source, projected actual emissions may be used in accordance with 40 CFR 51.166(r)(6)(vi) to show whether or not there is a reasonable possibility that the project that is not part of a

major modification may result in a significant emissions increase [as defined by 40 CFR 51.166(b)(23)] of any regulated NSR pollutant.

The first .0530(u) condition applies to the burning of natural gas in the Nos. 4 and 5 lime kilns and the Nos. 10 and 11 recovery furnaces. Blue Ridge Paper used projected actual emissions in Permit Application No. 4400159.10A to demonstrate that new burners firing natural gas would not result in a significant emissions increase. Blue Ridge Paper is required to maintain records of actual CO and VOC emissions from the lime kilns and recovery furnaces for five years following the resumption of regular operations after the modification was made. Blue Ridge Paper began keeping these records in January 2012. No changes to this 02D .0530(u) condition was necessary as part of this renewal.

Additionally, Blue Ridge Paper used projected actual emissions to avoid applicability of PSD requirements for the installation of the new Nos. 1 and 2 Package Boiler and Repowering Project. The Air Permit Review for Permit No. 08961T18, dated March 29, 2016, provides a detailed discussion on how the limits were developed. The current permit contains projected actual emission limits for SO_2, PM (filterable only), PM_{10}, $PM_{2.5}$, NO_X, CO, H_2SO_4, F, TRS, lead, and VOC. Once regular operating of the Nos. 1 and 2 Package Boilers begins, Blue Ridge Paper will be required to maintain records of actual emissions from the Big Bill Boiler (ID No. G11037), Peter G. Boiler (ID No. G11038), Riley Coal Boiler (ID No. G11039), No. 4 Power Boiler (ID No. G11040), and the Nos. 1 and 2 Package Boilers (ID Nos. G11050 and G11051) in tons per year, on a calendar year for five calendar years. These emissions will be compared to the projected actual limits and if actual emissions are higher, Blue Ridge Paper will provide an explanation in their annual report. No changes will be made to the permit under this renewal.

D. 112(r)

The 1990 Clean Air Act Amendments established provisions in Title 1, Part A, Section 112(r) for the prevention and mitigation of accidental chemical releases. The EPA published regulations under 40 CFR Part 68, "Chemical Accident Prevention Provisions." The goal of Part 68, and the risk management program required under Part 68, is to prevent accidental releases of substances that can cause serious harm to the public and the environment from short-term exposures and to mitigate the severity of releases that do occur.

Any tank, drum, container, pipe, or other "process" at a facility that contains any of the extremely hazardous toxic and flammable substances listed in 40 CFR 68.130 in an amount above the "threshold quantity" specified for that substance, the facility is required to develop and implement a risk management program (RMP).

According to the most recent 112(r) inspection report (August 8, 2015), Blue Ridge Paper owns and operates two processes that are subject to Section 112(r) and 40 CFR Part 68. Table 2 presents the two processes reported in the facility's RMP.

Table 2. Processes Subject to 112(r) and Included in the Blue Ridge Paper Risk Management Program

Process Description	Chemical Involved	Quantity of Chemical (lb)	Program Level
Chlorine Dioxide System	Chlorine Dioxide	33,000	3
Chlorine Water Treatment	Chlorine	24,000	3

Blue Ridge Paper is required to revise and update the RMP submitted under 40 CFR 68.150 once every five years, according to the requirements specified in 68.190(b)(2) through (b)(7). According to the August 2015 112(r) inspection, the RMP was last updated on June 13, 2014. As part of this permit renewal, the 112(r) language in the permit was modified to indicate the date of the most recent plan revision and the next renewal date. No further changes to the permit were necessary as part of this renewal.

E. Compliance Assurance Monitoring (CAM)

The compliance assurance monitoring (CAM) rule requires owners and operators to conduct monitoring to provide a reasonable assurance of compliance with applicable requirements under the act. Monitoring focuses on emissions units that rely on pollution control device equipment to achieve compliance with applicable standards. An emission unit is subject to CAM, under 40 CFR Part 64, if all of the following three conditions are met:

- The unit is subject to any (non-exempt, e.g., pre-November 15, 1990, Section 111 or 112 standard) emission limitation or standard for the applicable regulated pollutant.

- The unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit's pre-control potential emission rate exceeds 100 percent of the amount required for a source to be classified as a major source; i.e., either 100 tpy (for criteria pollutants) or 10 tpy of any individual/25 tpy of any combination of HAP.

In addition, an emissions unit is not subject to CAM if the unit is subject to one of the following emissions limitations or standards:

- Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act (e.g., MACT or NSPS).
- Stratospheric ozone protection requirements under title VI of the Act.
- Acid Rain Program requirements pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the Act.
- Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions within a source or between sources.
- An emissions cap that meets the requirements specified in §70.4(b)(12) or §71.6(a)(13)(iii) of this chapter.
- Emission limitations or standards for which Title V permit contains a continuous compliance determination method, as defined in 40 CFR 64.1, unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (e.g., a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).

Table 3, below, presents an analysis of the permitted emissions units from Section 1 of the permit. Based on this analysis, there are several emission units that are subject to a nonexempt PM emission standard, use a control device to meet the standard, **and** have uncontrolled potential PM emissions greater than 100 tpy. Therefore, conditions to address CAM will be added to the permit for the following emission units:

- No. 10 Recovery Furnace (ID No. G08020)
- No. 11 Recovery Furnace (ID No. G08021)
- No. 10 Smelt Dissolving Tank (ID No. G08023)
- No. 11 Smelt Dissolving Tank (ID No. G08024)
- No. 4 Lime Kiln (ID No. G09028)
- No. 5 Lime Kiln (ID No. G09029)
- Big Bill Utility Boiler (ID No. G11037)
- Peter G. Utility Boiler (ID No. G11038)
- Riley Coal Utility Boiler (ID No. G11039)
- No. 4 Power Boiler (ID No. G11040)
- Riley Bark Boiler (ID No. G11042)
- Utility Boiler Flyash Handling System (ID No. G11045)
- No. 4 Power Boiler Flyash Transfer Silo (ID No. G11025)

The following discussion briefly summarizes the CAM requirements for the units listed above. The proposed monitoring approach submitted by Blue Ridge Paper was used to develop these requirements, with some changes based on internal review by the Stationary Source Compliance Branch.

Recovery Furnaces, Lime Kilns, and Smelt Dissolving Tanks

As shown in Table 3, CAM is required for the recovery furnaces, lime kilns, and smelt dissolving tanks for the PM standards in 02D .0508 (Particulates from Pulp and Paper Mills). For PM control, the recovery furnaces are equipped with ESPs and the smelt dissolving tanks and lime kilns are equipped with scrubbers. A correlation between PM emissions and opacity was considered for the recovery furnaces and a correlation between PM emissions and scrubber pressure drop and scrubber liquid flow rate was considered for the smelt dissolving tanks and lime kilns. Developing a correlation between PM emissions and either opacity or scrubbing parameters was not possible for these sources using the existing performance test data. Previous performance tests were conducted at a single load for these sources and do not provide data across all ranges of operations and would not result in correlations that could be used for CAM. In lieu of conducting performance tests at multiple load ranges to determine a correlation between PM emissions and opacity or scrubber parameters, an alternative for indicator range was evaluated.

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
UNITS FOR WHICH CAM IS NOT APPLICABLE								
G01002	Chip Handling Operations	None	None	None	NA	NA	No	These units do **not** use a control device to achieve compliance with the emission limitation or standard. *[CAM is not applicable pursuant to 15A NCAC 02D .0614(a)(2)]*
G01003	Chip Storage Area	None	None	None	NA	NA	No	
G03005	No. 1 Hardwood Fiberline Brownstock Washing System	None	HAP	MACT (Subpart S)	NA	NA	No	
G03006	No. 2 Pine Fiberline Brownstock Washing System	None	HAP	MACT (Subpart S)	NA	NA	No	
G03007	Reject Knots	None	None	None	NA	NA	No	
G04009	No. 1 Hardwood Fiberline Oxygen Delignification System	None	HAP	MACT (Subpart S)	NA	NA	No	
G04010	No. 2 Pine Fiberline Oxygen Delignification System	None	HAP	MACT (Subpart S)	NA	NA	No	
G04025	No. 1 Hardwood Fiberline Pulp Screening System	None	HAP	MACT (Subpart S)	NA	NA	No	
G04026	No. 2 Pine Fiberline Pulp Screening System	None	HAP	MACT (Subpart S)	NA	NA	No	
G05073	Minerals Removal Process (MRP)	None	None	None	NA	NA	No	
G07019	Four (4) Heavy Black Liquor Storage Tanks	None	None	None	NA	NA	No	
G08020	No. 10 Recovery Furnace	None	SO_2	02D .0516	NA	NA	No	
			TRS	02D .0528	NA	NA	No	
G08021	No. 11 Recovery Furnace	None	SO_2	02D .0516	NA	NA	No	
			TRS	02D .0528	NA	NA	No	
G08022	Black liquor oxidation system	None[9]	H_2SO_4	02D .0317 02D .0530	NA	NA	No	
G09028	No. 4 Lime Kiln	None	SO_2	02D .0516	NA	NA	No	
G09029	No. 5 Lime Kiln	None	SO_2	02D .0516	NA	NA	No	
G09027	Lime Production – Other Units	None	None	None	NA	NA	No	
G10089	Green liquor clarification and storage	None	None	None	NA	NA	No	
G10090	Green liquor stabilization	None	None	None	NA	NA	No	
G11037	Big Bill Utility Boiler	None	SO_2	02D .0516, .0317, .0530	NA	NA	No	
			NO_X	02D .0519 and .0530	NA	NA	No	
			CO	02D .0530	NA	NA	No	
G11038	Peter G. Utility Boiler	None	SO_2	02D .0516, .0317, .0530	NA	NA	No	
			NO_X	02D .0519 and .0530	NA	NA	No	
			CO	02D .0530	NA	NA	No	
G11039	Riley Coal Utility Boiler	None	SO_2	02D .0516, .0317, .0530	NA	NA	No	
			NO_X	02D .0519 and .0530	NA	NA	No	
			CO	02D .0530	NA	NA	No	

[9] According to the emission inventory, the mist eliminator and scrubber do not control H_2SO_4 and SO_2.

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
G11040	No. 4 Power Boiler	None	SO_2	02D .0317 and NSPS (Subpart D)[10]	NA	NA	No	
			CO	02D .0530	NA	NA	No	
		SNCR	NO_X	NSPS (Subpart D)[11]	NA	Equipped with a NO_X CEMS	No	
G11042	Riley Bark Boiler	None	NO_X	02D .0519	NA	NA	No	
			SO_2	02D .0516	NA	NA	No	
G11044	Riley Bark boiler fuel feed system	None	None	None	NA	NA	No	
G11052 G11053	Crusher Coal Conveying and Storage System	None	PM	02D .0515	NA	NA	No	
G10035	No. 5 lime slaker serving No. 5 Lime Kiln	None[12]	PM	02D .0515	NA	No	Yes	
G10034	No. 6 lime slaker serving No. 4 Lime Kiln	None[12]	PM	02D .0515	NA	No	Yes	
G12048 G12049 G12050 G12051	Four paper machines	None	None	None	NA	NA	No	
G12077	Hot oil heaters installed on No. 19 paper Machine	None	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	
G16081	WTP Primary Clarifiers	None	None	None	NA	NA	No	
G16082	WTP Aeration and Digestion Basins	None	None	None	NA	NA	No	
G19058	Rewinders on Trim System No. 1	None	PM	02D .0515	NA	NA	No	
G10959	Rewinders on Trim System No. 2	None	PM	02D .0515	NA	NA	No	
G24087	No. 1 Hardwood Fiberline Deckers	None	HAP	MACT (Subpart S)	NA	NA	No	
G24088	No. 2 Pine Fiberline Deckers	None	HAP	MACT (Subpart S)	NA	NA	No	
G24092	Hardwood Brownstock High Density Storage	None	NA	None	NA	NA	No	
G24094	Pine Brownstock High Density Storage	None	NA	None	NA	NA	No	
16-CU-001	One 1850 horsepower, diesel-fired emergency generator	None	HAP	MACT (Subpart ZZZZ)	NA	NA	No	

[10] EPA issued a reconsideration for 40 CFR Part 60, Subpart D in June 2007. The entire rule was reissued at this time and the effective date of the rule is June 13, 2007.

[11] According to an email from B. Justus, AECOM and Blue Ridge Paper, dated Feb 8th, 2016, this is not operated and is not needed for compliance. However, the mill does not wish to remove the control device from the permit at this time.

[12] According to their renewal application, the condensing scrubbers installed on the lime slakers are used to prevent material loss and materials recovered by the scrubbers are reused in the process. The CAM rule (40 CFR 64.1) defines inherent process equipment as follows:

> "…equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. **For the purposes of this part, inherent process equipment is not considered a control device.**" [emphasis added]

Based on this definition, the scrubbers installed on the lime slakers are not considered control devices.

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
G06014	Chlorine dioxide generation system	Scrubber	None	None[13]	NA	NA	No	These units have a control device, but the unit **is not** subject to an emission limitation or standard. *[CAM is not applicable pursuant to 15A NCAC 02D .0614(a)(1)]*
G21072	Tall Oil Reactor	Scrubber	None	None	NA	NA	No	
G04011	White Liquor Oxidation System	Demister	PM	02D .0515	<1 tpy[14]	NA	No	These units have a control device and the control device is being used to comply with an applicable standard. The potential emissions prior to control are less than 100 percent of the amount required for a source to be considered major (i.e., less than 100 tpy). *[CAM is not applicable pursuant to 15A NCAC 02D .0614(a)(3)]*
G09031	No. 6 lime silo dust collection system	Bagfilter	PM	02D .0515	<1 tpy[14]	NA	No	
G09032	No. 5 lime silo dust collection system	Bagfilter	PM	02D .0515	<1 tpy[14]	NA	No	
G11054	No. 4 Boiler Bunker	Fabric filters	PM	02D .0515	< 1 tpy[14]	NA	No	
G13054	East starch storage silo	Bagfilter	PM	02D .0515	7 tpy[14]	NA	No	
G13055	West starch storage silo	Bin vent filter	PM	02D .0515	7 tpy[14]	NA	No	
G13056	Center starch storage silo	Bagfilter	PM	02D .0515	7 tpy[14]	NA	No	
G08022	Black liquor oxidation system	Cyclones, Thermal Oxidizer, and Caustic Scrubber	SO_2	02D .0317 02D .0530	82[14]	NA	No	
G08024	No. 10 Smelt Dissolving Tank	Mist eliminator and scrubber	TRS	NSPS (Subpart BB)	35[14]	NA	No	
G08024	No. 11 Smelt Dissolving Tank	Mist eliminator and scrubber	TRS	NSPS (Subpart BB)	35[14]	NA	No	
UNITS FOR WHICH CAM IS APPLICABLE BUT ARE EXEMPT FROM CAM								
G02004	Digester Area	LVHC Collection System burned in Lime Kilns	HAP/VOC	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
			TRS	02D .0528	NA	The control device (Lime Kiln) is equipped with a TRS CEMS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G05012	No. 1 Hardwood Fiberline Bleaching System	Scrubber	HAP/VOC	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*

[13] The chlorine dioxide generation system is subject to 112(r) which is a management practice and not an emission limitation.
[14] Precontrolled emissions provided by Blue Ridge Paper in Permit Renewal Application No. 4400159.11A, Table 4-1 and amended in June 3, 2016, submittal (Table 4-2).

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
G05013	No. 2 Pine Fiberline Bleaching System	Scrubber	HAP/VOC	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G07016	Black Liquor Evaporation System	LVHC Collection System burned in Lime Kilns	HAP/VOC	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
			TRS	02D .0528	NA	The control device (i.e., Lime Kiln) is equipped with a TRS CEMS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G07018	Foul condensate collection system	NCG Collection System burned in Lime Kilns	HAP/VOC	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
			TRS	NSPS (Subpart BB)	NA	The control device (i.e., Lime Kiln) is equipped with a TRS CEMS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G08020	No. 10 Recovery Furnace	ESP	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G08021	No. 11 Recovery Furnace	ESP	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G08022	Black liquor oxidation system	Cyclones, Thermal Oxidizer, and Caustic Scrubber	HAP	MACT (Subpart S, EBP)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G08023	No. 10 Smelt Dissolving Tank	Mist eliminator and scrubber	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G08024	No. 11 Smelt Dissolving Tank	Mist eliminator and scrubber	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G09028	No. 4 Lime Kiln	Mist eliminator and scrubber	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
			TRS	02D .0528	NA	Equipped with a CEMS for TRS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G09029	No. 5 Lime Kiln	Mist eliminator and scrubber	HAP (PM Surrogate)	MACT (Subpart MM)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
			TRS	02D .0528	NA	Equipped with a CEMS for TRS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G11037	Big Bill Utility Boiler	ESP	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G11038	Peter G. Utility Boiler	ESP	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G11039	Riley Coal Utility Boiler	ESP	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G11040	No. 4 Power Boiler	ESP	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
		SNCR	NO_X	NSPS (Subpart D)**Error! Bookmark not defined.**	NA	Equipped with a NO_X CEMS	No	The permit contains a continuous compliance method consistent with 40 CFR 64.1. *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(F)]*
G11042	Riley Bark Boiler	Multi-cyclone, scrubber	HAP (PM Surrogate)	112(j) Case-by-Case MACT	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G20060	No. 1 Hardwood Turpentine Recovery System	Burned in lime kilns	HAP	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*
G20062	No. 2 Pine Turpentine Recovery System	Burned in lime kilns	HAP	MACT (Subpart S)	NA	NA	No	This unit **is** subject to MACT standards applicable to the regulated pollutant proposed after November 5, 1990 *[Exempt from CAM pursuant to 15A NCAC 02D .0614(b)(1)(A)]*

Table 3. Compliance Assurance Monitoring Analysis

Emission Source ID No.	Emission Source Description	Control Device	Regulated Pollutant(s)	Applicable Standards	Pre-control PTE (tpy)	CEMS or COMS Installed?	Is CAM Applicable?	CAM Disqualification/ Exemptions
THE FOLLOWING UNITS ARE SUBJECT TO CAM								
G11045	Utility boiler flyash handling system	Bagfilter	PM	02D .0515	1,314[15]	NA	Yes	NA
G11025	No. 4 Power Boiler flyash transfer silo	Bagfilter	PM	02D .0515	166[15]	NA	Yes	NA
G08020	No. 10 Recovery Furnace	ESP	PM	02D .0508	38,873[15]	Equipped with a COMS for opacity	Yes	NA
G08021	No. 11 Recovery Furnace	ESP	PM	02D .0508	38,873[15]	Equipped with a COMS for opacity	Yes	NA
G08023	No. 10 Smelt Dissolving Tank	Mist eliminator and scrubber	PM	02D .0508 NSPS (Subpart BB)	1,555[15]	Continuous monitoring of flow rate and pressure drop	Yes	NA
G08024	No. 11 Smelt Dissolving Tank	Mist eliminator and scrubber	PM	02D .0508 NSPS (Subpart BB)	1,555[15]	Continuous monitoring of flow rate and pressure drop	Yes	NA
G09028	No. 4 Lime Kiln	Mist eliminator and scrubber	PM	02D .0508	1,111[15]	Continuous monitoring of flow rate and pressure drop	Yes	NA
G09029	No. 5 Lime Kiln	Mist eliminator and scrubber	PM	02D .0508	1,481[15]	Continuous monitoring of flow rate and pressure drop	Yes	NA
G11037	Big Bill Utility Boiler	ESP	PM	02D .0503 and .0530	23,915[15]	Equipped with a COMS for opacity	Yes	NA
G11038	Peter G. Utility Boiler	ESP	PM	02D .0503 and .0530	23,915[15]	Equipped with a COMS for opacity	Yes	NA
G11039	Riley Coal Utility Boiler	ESP	PM	02D .0503 and .0530	26,214[15]	Equipped with a COMS for opacity	Yes	NA
G11040	No. 4 Power Boiler	ESP	PM	02D .0530 and NSPS (Subpart D)	1,101[15]	Equipped with a COMS for opacity	Yes	NA
G11042	Riley Bark Boiler	Multi-cyclone, scrubber	PM	02D .0503 02D .0504	26,630[15]	Continuous monitoring of flow rate and pressure drop	Yes	NA

[15]Precontrolled emissions provided by Blue Ridge Paper in Permit Renewal Application No. 4400159.11A, Table 4-1 and amended in June 3, 2016, submittal (Table 4-2).

All of these sources are subject to the MACT standards under 40 CFR Part 63, Subpart MM, which regulates PM as a surrogate for metal HAP. Under Subpart MM, sources equipped with ESPs are required to install and operate COMS to measure opacity as an indicator of ESP performance. Corrective action is triggered when the COMS measures 10 consecutive 6-minute average opacity readings greater than 20 percent. A violation of the Subpart MM standards is considered to have occurred when opacity is greater than 35 percent for 6 percent or more of the operating time during any quarterly period.

Similarly, Subpart MM requires sources equipped with scrubbers to be equipped with continuous monitors to measure pressure drop and scrubber liquid flow rate. Corrective action is triggered when any 3-hour average pressure drop or scrubber liquid flow rate is outside of the compliance range determined during performance tests. A violation of the standards is considered to have occurred if six or more 3-hour average parameter values are outside of the compliance range during any 6-month reporting period.

The Subpart MM standards regulate PM emissions as measured by Method 5, which provides the filterable portion of PM emissions. In contrast, the 02D .0508 standards regulate PM emissions as measured by both Method 5 and Method 202. Therefore, it is more stringent to monitor opacity or scrubber parameters designed to demonstrate compliance with the filterable portion of PM only. Since the recovery furnaces, smelt dissolving tanks, and lime kilns are already complying with these requirements, the indicator ranges for CAM were based on the corrective action triggers associated with Subpart MM, with the exception of the No. 4 Lime Kiln.

As discussed above, the when firing No. 6 fuel oil provides more than 50 percent of the heat input to the No. 4 Lime Kiln, the Subpart MM compliance demonstration is applicable and the indicator ranges for CAM under this scenario were based on the corrective action triggers associated with Subpart MM. When natural gas provides more than 50 percent of the heat input to the No. 4 Lime Kiln, the indicator ranges will be determined during a performance test to be conducted within 180 days of the effective date of the permit. Once these ranges are determined, they will be incorporated into the permit.

DAQ policy is to require a quality improvement plan (QIP), which is a written plan that outlines the procedures that will be used to evaluate problems that affect the performance of control equipment. According to EPA's guidance document for CAM,[16] the permitting authority may require a source to develop and implement a QIP after a determination that the source has failed to use acceptable procedures in responding to an excursion or exceedance. Also, the rule allows the permitting authority flexibility to specify an appropriate threshold level for requiring the implementation of a QIP. The rule states that an appropriate threshold may be specified as "…an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period…." Furthermore, the rule states that the "…threshold level may be set at a higher or lower percent or may rely entirely on other criteria" that indicate whether the emissions unit and control device are being operated and maintained properly. [See 40 CFR 64.8(a)]

To determine the appropriate threshold level for requiring a QIP, a 5-percent duration of the operating time during the 6-month reporting period was considered for these sources only if the resulting duration was not less stringent than the Subpart MM monitoring exceedances definitions. For recovery furnaces equipped with ESPs, Subpart MM defines a monitoring exceedance as being when the opacity is greater than 35 percent for 6 percent or more of the operating time during a quarterly reporting period. Since the reporting period is semiannual for 02D .0508, a 12-percent duration over a 6-month period would be an equivalent number of hours (a maximum of 11 days per 6-month reporting period). A 5-percent duration of the operating time would be a maximum of 9 days per 6-month reporting period and is less than the Subpart MM duration for monitoring exceedances. Therefore, the QIP threshold for the recovery furnaces was set to 5 percent of the operating time during the reporting period.

For lime kilns and smelt dissolving tanks, a QIP threshold equal to a 5-percent duration of the operating time during the 6-month reporting period was also evaluated. For lime kilns and smelt dissolving tanks equipped with a scrubber, Subpart MM defines a monitoring exceedance as 6 or more 3-hour average monitoring parameter values out of range within a 6-month reporting period and also specifies no more than one exceedance will be attributed in any given 24-hour period. Therefore, the under Subpart MM, a maximum of 6 days of exceedances could be allowed. Five percent of the operating time of these sources would be a maximum of 9 days per 6-month reporting period. Therefore, setting the QIP threshold equal to a 5-percent duration of operating time would be less stringent

[16] Technical Guidance Document: Compliance Assurance Monitoring. U.S Environmental Protection Agency. OAQPS - Emission Measurement Center, Research Triangle Park, NC. August 1998. https://www.epa.gov/sites/production/files/2016-05/documents/cam-tgd.pdf

than Subpart MM. As a result, the QIP threshold was set equal to the Subpart MM definition of monitoring exceedances (no more than 6 3-hour average monitoring parameter values out of range within a 6-month reporting period.

Big Bill, Peter G, Riley Coal and No. 4 Boilers

For all four boilers, CAM is required for the PM standards in 02D .0503 (Particulates from Fuel Burning Indirect Heat Exchangers). For No. 4 Boiler, CAM is also required for the PM limits under 02D .0530 (Prevention of Significant Deterioration). The boilers are equipped with ESPs for PM control. A correlation between PM emissions and opacity was considered. Similar to the recovery furnaces above, developing an equation to represent the correlation between PM emissions and opacity was not possible for these sources using the existing performance test data since the performance tests were conducted at a single load and would not result in correlations that could be used for CAM. Therefore, in lieu of conducting performance tests at multiple load ranges to determine a correlation between PM emissions and opacity, an alternative for indicator range was evaluated.

The four boilers are subject to 112(j) requirements and Blue Ridge Paper is required to monitor opacity as a surrogate to PM emissions. The opacity limits in the 112(j) condition are based on past performance tests and the averaging period is a 30-day rolling average. The opacity limits developed using the correlation data were lower than the 112(j) limits and have a 3-hour averaging period. As a result, it was determined that these limits would be acceptable as indicator ranges for CAM. The QIP threshold was set at 5 percent of the operating time per 6-month period in accordance with EPA guidance.[16]

Riley Bark Boiler

The Riley Bark Boiler is subject to CAM for PM standards in 02D .0503 (Particulates from Fuel Burning Indirect Heat Exchangers) and 02D .0504 (Particulates from Wood Burning Indirect Heat Exchangers). The Riley Bark Boiler is equipped with a scrubber for PM control. Again, a correlation between PM emissions and scrubber parameters was considered, but not used because of the format of the performance tests.

Blue Ridge Paper is required to continuously monitor scrubber pressure drop and scrubber liquid flow rate for the Riley Bark Boiler under the 02D .0521 VE requirements. Therefore, as an alternative to using a correlation, the indicator range for the scrubber pressure drop and liquid flow rate was set to be the same as that for the VE standards, with a 3-hour block average under 02D .0521. The QIP threshold was set at 5 percent of the source operating time per 6-month period in accordance with EPA guidance.[16]

Flyash Handling Systems

The flyash handling systems are subject to 15A NCAC 02D .0515 (Particulates from Miscellaneous Industrial Processes). The emission limits for these regulations are presented in section V (Regulatory Review), above. For the Utility Boiler Flyash Handling System (ID No. G11045), compliance with the emission standards will be achieved using a fabric filter installed on the pneumatic flyash blower and a bin vent fabric filter installed on the main flyash silo. For the No. 4 Power Boiler Flyash Handling System (ID No. G11025), compliance with the emissions standards will be achieved using a bin vent fabric filter installed on the No. 4 Power Boiler Flyash Transfer Silo.

Visible emissions observations were selected as the performance indicator because it is a good indicator of the proper operation and maintenance of the fabric filters. When the filter units are operating properly, there will not be any visible emissions in the exhaust outlet. Any increase in visible emissions indicates reduced performance of the fabric filters, therefore, the presence of visible emissions is used as a performance indicator. The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. An indicator range of no visible emissions was selected because: (1) an increase in visible emissions is indicative of an increase in particulate emissions; and (2) a monitoring technique which does not require a Method 9 certified observer is desired. Although Reference Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of RM-22 can be applied to ducted emissions; i.e., Method 22-like observations.

The selected QIP threshold for fabric filter visible emissions is five excursions in a 6-month reporting period. This level is 3 percent of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

The current permit contains monthly visible emissions monitoring for these flyash handling sources. In their renewal application, Blue Ridge Paper proposed daily monitoring, agreeing with the analysis in the table above. Therefore, as a part of this renewal, the visible emissions conditions in Section 2.1 W.2.c was modified to require daily monitoring of the flyash handling system and a new condition, Section 2.1 W.3 was added for CAM. Blue Ridge Paper is required to conduct observations using Method 22-like procedures. Blue Ridge Paper will conduct specific quality assurance/quality control procedures and compliance will be demonstrated through monitoring, recordkeeping, and reporting.

VII. Facility Wide Air Toxics

The current permit (08961T18) contains facility wide toxic air pollutants (TAP) limits for acetaldehyde, formaldehyde, manganese, and phenol. These limits were added to the permit based on an air toxics compliance demonstration submitted in 2000 with a permit application for the Bleached Filtrate Recycle Process. These limits are being evaluated as a part of this renewal.

Session Law 2012-91 House Bill 952 allows for the removal of TAP emissions limits from a permit for all sources affected by a MACT standard under Parts 61 or 63 or a case-by-case MACT under 112(j) (these are also exempted under 15A NCAC 2Q .0702). NC DAQ considers the removal of the current toxic emission limits a "modification" for the purposes of the NC Air Toxics program and therefore the health risk analysis specified in 143-215.107(a)(5)(b) is required. Each toxic air pollutant (TAP) emitted from this facility needs to be evaluated to determine if the removal of the 15A NCAC 02D .1100 permit limits that are restricting the facility-wide TAP emissions presents an unacceptable risk[17] to human health.

The most recent and comprehensive modeling report was submitted in November 2009 as part of a permit application (Permit ID No. 4400159.9E) in response to the April 27, 2009, Director's call pursuant to 15A NCAC 2Q .0712. The Director's call required Blue Ridge Paper to demonstrate, through dispersion modeling, that TAP emissions from the facility (including combustion sources) would not cause an acceptable ambient level listed in 15A NCAC 02D .1104 to be exceeded beyond the property boundary. The November 2009 permit application included a modeling analysis that was an addendum to a July 2007 Last MACT Air Modeling Report and a September 2008 Combustion Source Modeling Report previously submitted by Blue Ridge Paper.

The July 2007 report presents the result of the modeled mill-wide emissions that are greater than the TAP permitting emission rate (TPER) listed in 15A NCAC 2Q .0711 for each of the following TAPs: acetaldehyde, acrolein, ammonia, arsenic, benzene, cadmium, chlorine, chlorobenzene, chloroform, cresol, formaldehyde, hydrogen sulfide, hydrogen chloride, methyl mercaptan (MMC), methyl ethyl ketone (MEK), nickel, phenol, and sulfuric acid. Excluded from this modeling was an analysis of combustion sources burning unadulterated fuel and pulp and paper wastewater sources emitting certain TAPs as exempted in 15A NCAC 2Q .0702 (as the rule was written at that time). The emission rates included in the modeling review represented normal mill operation at maximum production rates.

The July 2007 report also included proposed optimized permit limits for the modeled TAP emissions. These optimized rates were determined by scaling emissions from all process units such that the resulting modeled concentration was 80 percent of the AAL for each pollutant. The exception to this was methyl mercaptan, which was modeled to be 95 percent of the AAL. In that case, the proposed permit limits were equal to the methyl mercaptan emissions originally modeled.

In September 2008, Blue Ridge Paper submitted an addendum to the 2007 modeling analysis report. The September 2008 report included combustion sources in addition to the previously modeled process sources. When the combustion sources were added, several TAP that were below the TPER in the July 2007 report were then above the TPER and needed to be modeled. Furthermore, there were also TAP that were only emitted from the combustion sources that were emitted above the TPER and were added to the modeling analysis. The new TAP were: acrylonitrile, beryllium, carbon disulfide, chromates, hydrogen fluoride, manganese, and mercury.

Based on the July 2007 and September 2008 modeling analyses, the information provided in the November 2009 permit application demonstrated compliance with the AAL for all subject TAPs except for arsenic. The November 2009 permit application was amended in February 2012 with updated modeling data for arsenic. In March 2015, the revised air modeling was run using the emission source parameters as provided in the 2012 air modeling and

[17]Unacceptable risk is defined as exceeding the corresponding AAL for a particular HAP.

additional arsenic emissions data for emissions from smelt dissolving tanks, based on the 2013 emission inventory. The resulting modeled maximum concentration of arsenic demonstrated compliance with the current arsenic AAL, which was revised effective July 7, 2014.[18,19,20,21]

As shown in Section III, above, the permit has been modified several times since the last toxics demonstration, including the most recent permit modification for the Repowering Project (Permit Application No. 4400159.16A).[22] None resulted in a net increase in TAP (and therefore triggering a modeling demonstration). Therefore, the modeling conducted for the November 2009 permit application, and in March 2015 for arsenic, was used to evaluate whether the removal of the permit limits for the sources subject to MACT would present an unacceptable health risk.

Table 4 shows the modeling results for the November 2009 permit application for all TAP excluding arsenic, and the arsenic results from the March 2015 analysis. It should be noted that hydrogen sulfide and methyl mercaptan emissions from the wastewater treatment system are exempted from the modeling under 15A NCAC 2Q .0702(a)(24) and were not included in these results. Additionally, for any source that represents nonroutine uncontrolled emissions (i.e., NCG system and BLOX Bypass Stack), only TAP emissions with an AAL with an annual averaging time were modeled. As shown in Table 4, Blue Ridge Paper has demonstrated compliance with the AALs for all pollutants and no unacceptable health risk would be associated with removing the MACT sources from the modeling.

The next step was then to identify which of the sources modeled were exempt MACT sources. Table 5 presents a list of sources modeled in the November 2009 permit application and identifies the sources subject to MACT standards. The sources shown in Table 5 as being "nonexempt" are the sources for which permit limits will be included.

As previously discussed, in their July 2007 modeling report, Blue Ridge Paper provided proposed permit limits for each modeled pollutant. Table 6 presents the proposed optimized permit limits for each modeled source not subject to a MACT standard. These proposed limits were optimized such that if each source emitted the TAPs at the permitted rate, the peak modeled concentration would be no higher than 80 percent of the AAL. The peak modeled concentration that was optimized included the MACT sources (with the exception of the combustion sources). Had this been conducted for only the nonexempt sources, the optimized emission rates would have been higher, making the limits proposed for the nonexempt sources conservative limits. Therefore, the permit limits presented in Table 6 was added to the permit.

VIII. Facility Emissions Review

There is no increase in the Title V potential emission for this renewal. Actual emissions for 2010 through 2014 as reported in the emission inventories are presented in the table at the beginning of this permit review.

IX. Facility Compliance Status

Due to its size and complexity, the Blue Ridge Paper mill is inspected in phases. The last inspection of this facility was completed between June 21, 2016 by Brendan Davey of the Asheville Regional Office (ARO). At the time of the inspection, the facility "appeared to be in compliance with all permitting requirements."

X. Draft Permit Review Summary

A copy of the draft permit was submitted to the ARO on August 12, 2016. The ARO responded on September 19, 2016, and September 27, 2016. Comments were incorporated as suggested and if any issues arose, they were

[18] The permit application submitted in response to the Director's Call (Permit Application no. 4400159.9E) was recommended for withdrawal on March 10, 2015. The revised arsenic modeling and the 2009 modeling analysis were determined to have adequately demonstrated compliance with the AAL for all modeled TAP.

[19] The 2007 modeling report was approved in a memorandum dated August 1, 2007 from Tom Anderson, AQAB to Wallace Pitts, RCO, and the ARO Permit Coordinator.

[20] In reference to the information submitted to DAQ for the Directors Call under 02Q .0712, a Notice of Deferral of Action, dated March 3, 2011 from Sheila Holman, Director DAQ to Dane Griswold, Blue Ridge Paper, indicated that the modeling information "…submitted by your facility demonstrated compliance with the AAL for all subject TAPs except for arsenic." The arsenic modeling was approved March 6, 2015. Refer to Review for Permit Application Denial/Return dated March 10, 2015 for additional details regarding toxics modeling.

[21] The modeling analysis included emissions from the waste treatment plant clarifiers, except for emissions of hydrogen sulfide and methyl mercaptan. Emissions of these pollutants from wastewater treatment plants at pulp and paper mills are exempt under 02Q .0702(a)(24).

[22] Refer to the Air Permit Review for Permit No. 08961T18, dated March 29, 2016.

Table 4. Summary of Air Toxics Modeling Results for Blue Ridge Paper

Pollutant	Averaging time	Peak Modeled Concentration ($\mu g/m^3$)	AAL Standard ($\mu g/m^3$)	Less than standard (Y/N)	% of Standard	Modeling Report[a]
Acetaldehyde	1-hour	885.46	27000	Yes	3.3%	Sep 2008
Acrolein	1-hour	3.54	80	Yes	4.4%	Sep 2008
Acrylonitrile	Annual	0.00299	0.15	Yes	2.0%	Sep 2008
Ammonia	1-hour	457.28	2700	Yes	16.9%	July 2007
Arsenic	Annual	$7.8x10^{-7}$	$2.1x10^{-6}$	Yes	37%	March 2015
Benzene	Annual	0.02	0.12	Yes	16.6%	Sep 2008
Beryllium	Annual	0.00009	0.0041	Yes	2.2%	Sep 2008
Cadmium	Annual	0.00046	0.0055	Yes	8.4%	Sep 2008
Carbon Disulfide	24-hour	0.009	186	Yes	0.0%	Sep 2008
Chorine	24-hour	1.02	37.5	Yes	2.7%	July 2007
Chlorine	1-hour	8.91	900	Yes	1.0%	July 2007
Chlorobenzene	24-hour	0.15	2200	Yes	0.0%	July 2007
Chloroform	Annual	0.62	4.3	Yes	14.4%	July 2007
Cresol	1-hour	76.60	2200	Yes	3.5%	July 2007
Formaldehyde	1-hour	11.57	150	Yes	7.7%	Sep 2008
Hydrogen Chloride	1-hour	8.93	700	Yes	1.3%	Sep 2008
Hydrogen Fluoride	24-hour	0.86	30	Yes	2.9%	Sep 2008
Hydrogen Sulfide	24-hour	8.70	120	Yes	7.3%	July 2007
Manganese	24-hour	0.11	31	Yes	0.3%	Sep 2008
Mercury	24-hour	0.00073	0.6	Yes	0.1%	Sep 2008
Methyl Ethyl Ketone	24-hour	39.78	3700	Yes	1.1%	Sep 2008
Methyl Ethyl Ketone	1-hour	220.01	88500	Yes	0.2%	Sep 2008
Methyl Mercaptan	1-hour	47.78	50	Yes	95.6%	July 2007
Nickel	24-hour	0.0204	6	Yes	0.3%	Sep 2008
Phenol	1-hour	8.56	950	Yes	0.9%	Sep 2008
Soluable Chromate Compounds	24-hour	0.0081	.62	Yes	1.3%	Sep 2008
Sulfuric Acid	24-hour	1.98	12	Yes	16.5%	July 2007
Sulfuric Acid	1-hour	11.08	100	Yes	11.1%	July 2007

[a]The November 2009 permit application was submitted as an addendum to the July 2007 and September 2008 modeling reports. The November 2009 permit application did not contain any new modeling information for TAPs, except for arsenic.

Table 5. Modeled Emission Sources MACT Status

Permit ID	Source Name	MACT Status
Point Sources		
G11037	Big Bill utility boiler	MACT – 112(j)
G11038	Peter G. utility boiler	MACT – 112(j)
G11039	Riley Coal utility boiler	MACT – 112(j)
G11040	No. 4 power boiler	MACT – 112(j)
G11042	Riley Bark boiler	MACT – 112(j)
G08022	Regenerative Thermal Oxidizer for BLOX	MACT – Subpart S (EBP)
G07018	SOG Main	MACT – Subpart S
G24088	No. 1 Fiberline Decker	MACT – Subpart S
G24088	No. 2 Fiberline Decker	MACT – Subpart S
G12051	No. 11 Paper Machine	nonexempt
G12050	No. 12 Paper Machine	nonexempt
G12049	No. 19 Paper Machine	nonexempt
G12048	No. 20 Paper Machine	nonexempt
G09029	No. 5 Lime Kiln	MACT – Subpart MM
G09028	No. 4 Lime Kiln	MACT – Subpart MM
G06014	ERCO Generator	nonexempt
G08021	No. 11 Recovery Furnace	MACT – Subpart MM
G08020	No. 10 Recovery Furnace	MACT – Subpart MM
I-G08074	Chloride Removal Process (CRP)	nonexempt
G10035	No. 5 Slaker	nonexempt
G10034	No. 6 Slaker	nonexempt
G05013	No. 2 Bleach Plant Scrubber (Pine)	MACT – Subpart S
G05012	No. 1 Bleach Plant Scrubber (Hardwood)	MACT – Subpart S
G21072	Tall Oil	nonexempt
G23078	NCG Main	nonexempt
G04010	Softwood (Pine) O2 Delignification	MACT – Subpart S
G04009	Hardwood O2 Delignification	MACT – Subpart S
G04025	Hardwood Pulp Screening	MACT – Subpart S
G08023	No. 10 Smelt Dissolving Tank	MACT – Subpart MM
G08024	No. 11 Smelt Dissolving Tank	MACT – Subpart MM
G03005	No. 1 Hardwood Brownstock Washer	MACT – Subpart S
G03005	No. 2 Hardwood Brownstock Washer	MACT – Subpart S
G03005	No. 3 Hardwood Brownstock Washer	MACT – Subpart S
G03005	No. 4 Hardwood Brownstock Washer	MACT – Subpart S
G04026	Pine Pulp Screening	MACT – Subpart S
G04011	White Liquor Oxidizer	nonexempt
G03006	No. 2 Pine Brownstock Washer Mix Tank	MACT – Subpart S
G09027	No. 4 Lime Mud Dryer	nonexempt
G09027	No. 5 Lime Mud Dryer	nonexempt

Table 5. Modeled Emission Sources MACT Status (continued)

Permit ID	Source Name	MACT Status
G09027	No. 6 Lime Mud Dryer	nonexempt
G08022	Black Liquor Oxidation Bypass Stack[a]	MACT – Subpart S (EBP)
G05073	Metals Removal Process (MRP)	nonexempt
Volume Sources		
G16081	WTP No. 2 Primary Clarifier (Vent ID 099-T19)	nonexempt
G16081	WTP No. 3 Primary Clarifier (Vent ID 099-T20)	nonexempt
I-G23066	No. 1 Fiberline Building	nonexempt
I-G23066	No. 2 Fiberline Building	nonexempt
G07019	East Heavy Liquor Storage	nonexempt
G07019	West Heavy Liquor Storage	nonexempt
G07019	Red liquor tank	nonexempt
I-G03007	Hardwood knotter pile	nonexempt
I-G03007	Pine Knotter pile	nonexempt
G07086	Weak Black Liquor Storage	nonexempt
G24092	No. 1 Unbleached Pulp Storage	nonexempt
G24094	No. 2 Unbleached Pulp Storage	nonexempt
G02004	Digester Building	MACT
G10089 and G10090	Green Liquor Storage Tank	nonexempt
I-G10036	Causticizing Tanks	nonexempt

[a]Represents a non-routine emission point with a limited number of annual hours. During normal operations, emissions are vented to a control device. The modeled values represent a source that is modeled for annual operations only since the source does not emit under routine operations.

Table 6. Permitted Emission Limits

Permit ID	Permit Emission Source Description	Proposed Air Toxics Emissions Rates (lb/hr)													
		Acet-aldehyde	Acrolein	Ammonia	Benzene	Chlorine	Chloro-benzene	Chlorform	Cresol	Form-aldehyde	H_2S	HCl	Methyl Mercaptan	MEK	Phenol
Point Sources															
G12051	**No. 11 Paper Machine**	1.68E+01	6.80E-02	1.42E+01						1.42E+00				3.09E+00	
G12050	**No. 12 Paper Machine**	1.68E+01	6.80E-02	1.42E+01						1.42E+00				3.09E+00	
G12049	**No. 19 Paper Machine**	6.11E+01	2.47E-01	1.42E+01				5.56E+00		5.15E+00				1.12E+01	
G12048	**No. 20 Paper Machine**	3.36E+01	1.36E-01	1.42E+01				5.38E-01		2.83E+00				6.18E+00	
G06014	**Chlorine dioxide generation system**	9.52E-02				3.91E+00		1.98E-04		1.64E-02		4.56E+00		5.47E-02	
I-G08074	**Chloride Removal Process (CRP)**	9.66E-03													
G10035	**No. 5 Lime Slaker serving No. 5 Lime Kiln**	1.71E+01		1.67E+01	9.78E-03									1.11E+00	
G10034	**No. 6 Lime Slaker serving No. 4 Lime Kiln**	1.14E+01		1.11E+01	6.52E-03									7.39E-01	
G21072	**Tall Oil Reactor**	2.24E-01	2.86E-03		7.66E-04		1.06E+00				6.73E-01		2.56E-01	5.27E-01	1.18E+01
G04011	**White Liquor Oxidation System**	3.23E-01			1.07E-02									4.27E-01	
G09027.4	**No. 4 Lime Precoat Filter**	1.40E-01	7.28E-04		5.73E-04		3.30E+00			1.14E-02				5.62E-02	
G09027.5	**No. 5 Lime Precoat Filter**	2.52E-01	1.31E-03		1.15E-03		6.61E+00			2.05E-02				1.01E-01	
G09027.6	**No. 6 Lime Precoat Filter**	1.12E-01	5.82E-04		4.85E-04		2.85E+00			9.10E-03				4.49E-02	
G05073	**Minerals Removal Process (MRP)**							9.52E-03							
Volume Sources															
G16081	**WTP Primary Clarifiers (No. 2)[a]**	3.92E+01		1.35E-01		8.40E-03			2.89E-02	1.42E-01				2.86E+01	1.77E-01

Table 6. Permitted Emission Limits

Permit ID	Permit Emission Source Description	Proposed Air Toxics Emissions Rates (lb/hr)													
		Acet-aldehyde	Acrolein	Ammonia	Benzene	Chlorine	Chloro-benzene	Chlorform	Cresol	Form-aldehyde	H_2S	HCl	Methyl Mercaptan	MEK	Phenol
G16081	**WTP Primary Clarifiers (No. 3)[a]**	3.92E+01		1.35E-01		8.40E-03			2.89E-02	1.42E-01				2.86E+01	1.77E-01
I-G23066	**No. 1 Fiberline Building**	2.14E+01													
I-G23066	**No. 2 Fiberline Building**	1.67E+00	1.78E-01		3.73E-04					6.66E-02	9.03E-02		5.53E-02	8.05E+00	
G07019	**Heavy Liquor Storage Tanks (East)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
G07019	**Heavy Liquor Storage Tanks (West)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
G07019	**Heavy Liquor Storage Tanks (Red liquor tank)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
I-G03007	**Reject knots (hardwood knotter pile)**									4.87E-02				2.66E-01	
I-G03007	**Reject knots (pine knotter pile)**									4.00E-02				2.18E-01	
G07086	**Weak Black Liquor Storage Tanks**	9.19E-02	1.40E-03		1.49E-03						1.93E+00			5.47E-01	
G24092	**Hardwood Brownstock High Density Storage**	1.32E-01			3.35E-05			7.21E-04					3.70E-03	2.32E-01	1.47E+00
G24094	**Pine Brownstock High Density Storage**	1.32E-01			3.35E-05			7.21E-04					3.70E-03	2.32E-01	1.47E+00
G10089 and G10090	**Green Liquor Clarification and storage**	5.35E-02			3.42E-03								8.82E-03	3.15E-01	
I-G10036	**Causticizing Tank**	3.53E-01		1.59E+01	8.32E-05									1.10E-02	
	Total	**263**	**0.704**	**101**	**0.0355**	**3.93**	**13.8**	**6.11**	**0.0578**	**11.3**	**5.18**	**4.56**	**0.628**	**97.5**	**15.1**

[a]Hydrogen sulfide and methyl mercaptan emission from wastewater treatment systems are exempt from the modeling requirements.

discussed with ARO and addressed. Discussion related to any changes suggested by ARO was folded into this permit review and not discussed separately.

XI. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be made (via DAQ website). The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

The states of South Carolina, Tennessee, Georgia and Western NC Local Program are each affected areas within approximately 50 miles of the facility.

Update with public comments that were received and how they were addressed.

XII. Conclusions, Comments and Recommendations

PE Seal

Pursuant to 15A NCAC 2Q .0112 "Application requiring a Professional Engineering Seal," a professional engineer's seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in Rule .0103 of this Section that involve:

(1) design;
(2) determination of applicability and appropriateness; or
(3) determination and interpretation of performance; of air pollution capture and control systems.

A professional engineer's seal (PE Seal) was **NOT** required for this renewal.

Zoning

A Zoning Consistency Determination per 2Q .0304(b) was **NOT** required for this renewal.

Recommendations

This permit modification application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Recommend Issuance of Permit No. 08961T19. ARO has received a copy of this permit and submitted comments that were incorporated as described in Section X.

Attachment 1

Analysis of Subpart S Startup, Shutdown, and Malfunction

Table 1-1. Startup, Shutdown, and Malfunction Analysis

Citation	Requirement (prior to SSM vacatur)	Requirement (RTR amendments, revised SSM standards) (September 11, 2012)	112(j)	Conclusion
63.443(e) – Stds for pulping systems	(e) Periods of excess emissions reported under §63.455 shall not be a violation of §63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: (1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and (2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and (3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.	(e) Periods of excess emissions reported under §63.455 shall not be a violation of §63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: (1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and (2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and (3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.	No 112(j) provisions were set. From what I can tell, 112(j) was set for systems were numeric (or parametric) standards were set. The permit contains the following in Section 2.2 C.1: e. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: i. One percent for the LVHC System	Since no 112j was developed, we can change the condition without a sunset date
63.445 – Standards for bleaching systems	NONE	No specific language in Bleaching standards. However, compliance is achieved with monitoring, which is addressed in the monitoring requirements of Subpart S. [see 63.453(q) below]	• Startup, Shutdown and Malfunction are defined • Work Practices are specified to be conducted during periods of SSM • Periods of startup and shutdown managed according to the work practices are not considered excess emissions under Subpart S.	Sunset the 112(j) provisions. Add a paragraph to the bleaching condition referring to the SSM under 112j with a sunset date.

Table 1-1. Startup, Shutdown, and Malfunction Analysis (continued)

Citation	Requirement (prior to SSM vacatur)	Requirement (RTR amendments, revised SSM standards) (September 11, 2012)	112(j)	Conclusion
63.446(g) – Stds for pulping condensates	(g) For each control device (e.g. steam stripper system or other equipment serving the same function) used to treat pulping process condensates to comply with the requirements specified in paragraphs (e)(3) through (e)(5) of this section, periods of excess emissions reported under §63.455 shall not be a violation of paragraphs (d), (e)(3) through (e)(5), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent. The 10 percent excess emissions allowance does not apply to treatment of pulping process condensates according to paragraph (e)(2) of this section (e.g. the biological wastewater treatment system used to treat multiple (primarily non-condensate) wastewater streams to comply with the Clean Water Act).	(g) For each control device (e.g., steam stripper system or other equipment serving the same function) used to treat pulping process condensates to comply with the requirements specified in paragraphs (e)(3) through (5) of this section, periods of excess emissions reported under §63.455 shall not be a violation of paragraphs (d), (e)(3) through (5), and (f) of this section provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent. The 10 percent excess emissions allowance does not apply to treatment of pulping process condensates according to paragraph (e)(2) of this section (e.g., the biological wastewater treatment system used to treat multiple (primarily non-condensate) wastewater streams to comply with the Clean Water Act).	No 112(j) provisions were set. From what I can tell, 112(j) was set for systems were numeric (or parametric) standards were set. The permit contains the following in Section 2.1 C.1.f: vi. For the foul condensate steam stripper system used to comply with the requirements specified in paragraph 63.446(e)(3) or (5), periods of excess emissions reported under Sec. 63.455 shall not be a violation of paragraphs 63.446(d), (e), and (f) provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.	Since no 112j was developed, we can change the condition without a sunset date

Table 1-1. Startup, Shutdown, and Malfunction Analysis (continued)

Citation	Requirement (prior to SSM vacatur)	Requirement (RTR amendments, revised SSM standards) (September 11, 2012)	112(j)	Conclusion
63.453(q) – Monitoring Requirements	NONE	(q) At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	None?	Since no 112j was developed, we can change the condition without a sunset date
63.455(g) – Reporting Requirements	NONE	(g) Malfunction reporting requirements. If a malfunction occurred during the reporting period, the report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.453(q), including actions taken to correct a malfunction.	None	Since no 112j was developed, we can change the condition without a sunset date

Table 1-1. Startup, Shutdown, and Malfunction Analysis (continued)

Citation	Requirement (prior to SSM vacatur)	Requirement (RTR amendments, revised SSM standards) (September 11, 2012)	112(j)	Conclusion
63.456 – Affirmative Defense		Affirmative defense for violation of emission standards during malfunction		Since no 112j was developed, we can change the condition without a sunset date